

# *Aristotle*

SEMANTICS AND ONTOLOGY

VOLUME ONE



BY

L. M. DE RIJK

BRILL PHILOSOPHIA ANTIQUA

ARISTOTLE  
SEMANTICS AND ONTOLOGY  
VOLUME ONE



# PHILOSOPHIA ANTIQUA

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L. M. DE RIJK



# ARISTOTLE

# SEMANTICS AND ONTOLOGY

VOLUME I: GENERAL INTRODUCTION.  
THE WORKS ON LOGIC

BY

L.M. DE RIJK



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## TABLE OF CONTENTS

Preface .....	xv
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### VOLUME ONE: General Introduction. The Works on Logic

Chapter One: Preliminary Matters .....	1
1.1 Aristotle the philosopher and his interpreters .....	1
1.11 The development theory and its aftermath .....	3
1.12 The general porport of the present study .....	7
1.13 The Greeks in search for λόγος out off χάος .....	12
1.2 Language and ontology .....	14
1.21 The structural limits of language .....	14
1.22 Deep structure analysis in Aristotle .....	16
1.3 Meaning and representation .....	20
1.4 Charles Kahn's view of copulative 'be' as central for the uses of εἶναι .....	24
1.5 The common doctrine of 'be' rephrased in light of Aristo- telian semantics .....	30
1.51 No copulative 'be' in Aristotle's protocol language..	31
1.52 A preliminary survey of Aristotle's notion of 'be' .....	33
1.53 An appendix on various uses of ὑπάρχειν .....	37
1.6 Εἶναι and its cognates in Aristotle's philosophical investigations .....	43
1.61 Τὸ ὄν and τὰ ὄντα .....	44
1.62 The various uses of οὐσία .....	47
1.63 A preliminary assessment of these uses.....	52
1.64 The 'connotative' or 'intensional' use of 'be' .....	53
1.7 Some basic semantic rules. Ambivalence vs. ambiguity ....	60
1.71 Four Main Rules of Aristotelian semantics .....	60
1.72 Ambivalence vs. ambiguity .....	69
1.73 Modern parallels to the Main Rules .....	72
Chapter Two: Statement-making, Categorization, and Argumentation .....	75
2.1 Aristotle's deep structure analysis of statement-making ....	75
2.11 'Predication' in Aristotle. The τὶ κατὰ τινός device...	75



2.12	The monadic analysis of Aristotelian statement proposed by M. Matthen .....	80
2.13	The semantic paradigm of assertions with 'is' as an assertoric operator .....	83
2.14	Aristotle's protocol language of the statement-making utterance .....	86
2.15	The copula-less exegesis evidenced .....	87
2.16	The import of the distinction between 'assertible' and 'assertion' .....	93
2.17	Allan Bäck's 'aspect theory' of Aristotelian predication .....	96
2.18	The notion of ὑποκεῖσθαι in Aristotle .....	99
2.2	Naming vs. asserting. Onomastic vs. apophantic level .....	100
2.21	Φάναι and φάσις. Κατάφασις and ἀπόφασις. Ἀντίφασις .....	101
2.22	Λόγος and πρᾶγμα .....	104
2.23	Aristotle's use of πρᾶγμα assessed in a broader context .....	111
2.24	Διάνοια and πρᾶγμα .....	114
2.3	Συμπλοκή and σύνθεσις. The role of διαίρεσις .....	115
2.31	What precisely does συμπλοκή bear on? [a] συμπλέκειν [b] συμπλοκή .....	116
2.32	Σύνθεσις and διαίρεσις [a] συντιθέναι [b] σύνθεσις .....	120
2.33	Résumé .....	127
2.34	Ἀλήθεια and ψεῦδος, and cognate notions .....	128
2.35	The functions of ὄνομα and ῥῆμα in the assertible (λόγος) .....	131
2.4	The semantics of the <i>Categories</i> : Categorization .....	133
2.41	The Aristotelian categories are classes of names, not sentence predicates .....	133
2.42	Categorization .....	135
2.5	The different devices in Aristotle's strategy of argument ....	136
2.51	The agonistic spirit of Greek culture .....	136
2.52	Ἀπόδειξις: Epistemonik proof .....	139
2.53	Ἐπαγωγή in Aristotle: a heuristic strategy .....	140
2.54	The syllogism based on induction vs. induction .....	144
2.55	Persuasion only found in the ἐπακτικὸς λόγος .....	148
2.56	On the 'universal point' aimed at by Aristotelian induction .....	153
2.57	Example (παράδειγμα) .....	156

2.6	The role of categorization in Aristotle's strategy of argument.....	159
2.61	Categorization at work in <i>APr.</i> II 21 .....	159
2.62	Again, the proper nature of the 'universal point' .....	166
2.7	Categorization and the use of the qua-location as its main device .....	167
2.71	Particulars as the ultimate objects of epistemonik proof.....	168
2.72	Focalization and categorization, and the acquisition of the 'middle' .....	169
2.73	Qua-location as the proper device for Aristotle's strategy of argument .....	170
2.74	<i>APr.</i> I 37-38 and the role of the qua-location .....	175
2.75	The modest role of prioristic syllogistics in Aristotelian argument .....	179
2.76	Indexing by qua-location as <i>the</i> device for commensurate categorization .....	185
Chapter Three : Apophantics. The Semantics of Statement-making in <i>De interpretatione</i> .....		190
3.1	Introduction .....	190
3.2	Some basic devices for statement-making.....	192
3.21	Words as representing thoughts.....	192
3.22	Combined and uncombined thoughts and utterances.....	193
3.23	The impact of combination on statemental truth and falsehood .....	195
3.24	On time-connotation and timelessness.....	199
3.25	The semantics of naming. "ὄνομα defined.....	204
3.26	The semantics of verbal or nominal attribution. Ρῆμα defined.....	207
3.27	Ρῆμα opposed to ὄνομα .....	212
3.28	Is ῥῆμα 'verb'? .....	214
3.3	The "curious medley" found in the chapter's final part (16b19-25) .....	215
3.31	Some philological problems concerning 16b22-25 ...	219
3.32	The diverse ways of interpreting 16b22-25 .....	221
3.33	On Boethius' main source, Ammonius.....	224
3.34	Ammonius's debatable appeal to Alexander.....	229
3.35	Some notes on the origin of the copula construal 'S is P' .....	235



3.36	Thomas Aquinas going his own way .....	238
3.37	Consuming now the 'indigestible' portion .....	242
3.4	On statement-making .....	248
3.41	The semantics of λόγος (both 'assertible' and 'assertion') .....	248
3.42	Affirmation, negation, and contradiction .....	250
3.5	On opposition in general .....	255
3.51	The different 'states of affairs' (πράγματα) .....	255
3.52	On universal and partial quantification .....	257
3.53	On contrary and contradictory opposition .....	260
3.54	Does Aristotle's concept of 'contradiction' differ from ours? .....	262
3.55	On single affirmation and negation .....	266
3.6	The problems surrounding expressions concerning future events .....	268
3.61	Some introductory remarks .....	269
3.62	Status quaestionis .....	273
3.63	The so-called determinist's or fatalistic argument ....	276
3.64	The 'either-true-or-false-of-necessity' issue correctly understood .....	283
3.65	On the notion of necessity .....	286
3.66	Taking the dichotomy 'assertible' vs. 'assertion' seriously .....	288
3.67	Summary of the argument of 19a7-b4 .....	293
3.68	Boethius's exegesis of Aristotle's solution .....	295
3.69	Two final remarks on the 'assertion vs. assertible' device .....	301
3.7	Simple statements and their mutual relations .....	302
3.71	'Simple statement' defined .....	303
3.72	On primitive affirmation and negation .....	305
3.73	On 'Is' acting as a 'third element' .....	306
3.74	The key role of the disjunction made between onoma and rhema at 19b21-22 .....	310
3.75	Focussing on <i>either</i> the ῥῆμα part <i>or</i> the ὄνομα part ..	314
3.76	On contrary vs. contradictory opposition .....	320
3.77	The so-called 'Proclus's canon' .....	326
3.78	On changing the word-order .....	328
3.8	Again, on correctly framing contradictions .....	332
3.81	The notion of 'making up one thing' .....	332
3.82	On assigning two conjoint designations .....	335

3.83	Summary of chapter 11 .....	340
3.84	On using modal expressions.....	341
3.85	The semantic function of πρόσθεσις .....	345
3.86	On negating modal expressions. Continuation .....	346
3.87	Contradiction, contrariety, and contrary beliefs.....	347
3.88	True and false belief.....	348
3.89	From belief to spoken expressions .....	350
3.9	Conclusion .....	351
3.91	The main outcome of <i>Int.</i> highlighted .....	352
3.92	The treatise's doctrinal and strategic position .....	354
	Chapter Four: The Doctrine of Categorical Being .....	358
4.0	Introductory note .....	358
4.1	The proper status of the Aristotelian categories .....	358
4.11	Late Antiquity and Middle Ages .....	358
4.12	Kant and the aftermath .....	361
4.13	Contemporary views .....	364
4.14	The categories as classes of names. Categorisation ...	368
4.2	On naming. Names and the things named .....	373
4.21	Homonymy. Synonymy and Paronymy .....	374
4.22	The semantic diagram .....	375
4.23	The notion of ὑποκείσθαι (ὑποκείμενον) .....	377
4.24	The purport of the semantic diagram .....	378
4.25	The transitivity rule. Metalepsis.....	380
4.3	The ten categories listed .....	384
4.31	Things brought up without any combination (κατὰ μηδεμίαν συμπλοκήν) .....	384
4.32	Κατηγορία, κατηγορεῖν, and categorization .....	386
4.4	On the protagonist of the list, οὐσία .....	388
4.41	Primary and secondary ousia. Sequels to this way of naming .....	389
4.42	Sequels to naming concerning 'things present in a substrate' .....	390
4.43	The ontic status of secondary ousiai. Ousia further assessed.....	392
4.44	The characteristics of ousiai and their specific differences .....	393
4.45	On the this-ness and definiteness of ousia.....	396
4.46	On certain other characteristics of ousia .....	399
4.47	An additional question about λόγος and δόξα.....	401
4.48	What does Aristotle mean by οὐσία? .....	403



4.5	Quantitative being .....	404
4.6	The category <i>πρός τι</i> as primarily modifying naming .....	408
4.61	The nature and practical impact of relational naming .....	409
4.62	Of what nature are the correlates meant at 6b2-3? ...	410
4.63	Knowledge ( <i>ἐπιστήμη</i> ) and perception ( <i>αἴσθησις</i> ) ..	411
4.64	State ( <i>ἔξις</i> ), disposition ( <i>διάθεσις</i> ), and posture ( <i>θέσις</i> ) [a] Ἔξις [b] Διάθεσις [c] Θέσις.....	414
4.65	Why should the correlates ‘reciprocate’?.....	423
4.66	On reciprocity as to implication of ‘being given’ .....	427
4.67	The requirement of simultaneity by nature .....	429
4.68	Relational being as discussed elsewhere. Aristotle vs. Plato .....	433
4.69	Why should the first definition be revised? .....	438
4.7	Qualitative being .....	442
4.71	Four kinds of qualitative being .....	442
4.72	On paronymy .....	445
4.73	Some characteristics of qualitative being .....	448
4.8	The remaining six modes of categorial being. The <i>Postpraedicamenta</i> .....	449
4.81	The fourfold classification of opposites .....	450
4.82	On things opposed in virtue of a relational mode of being .....	450
4.83	On things contrarily opposed .....	451
4.84	On things privatively opposed .....	453
4.85	On things opposed as assertion and denial .....	455
4.86	Priority, posteriority, and simultaneity.....	460
4.87	On logico-semantic (non-)priority and the implica- tion of ‘being given’ .....	461
4.88	On being simultaneous .....	464
4.89	Change as observed in four kinds of categorial being	465
4.9	The different kinds of ‘having’ ( <i>ἔχειν</i> ) .....	466
Chapter Five : The <i>Topics</i> and the <i>Sophistic Refutations</i> .....		472
5.1	Preliminary matters ( <i>Top.</i> I, chs. 1-4.....	472
5.2	The categories and the “paradigms of assignment” (‘predicables’) .....	476
5.21	The so-called ‘predicables’ introduced in <i>Top.</i> I, 5-6 and 8.....	476
5.22	How the categories and the ‘four items’ are integrated	484
5.23	The notions <i>τί ἐστι</i> and <i>οὐσία</i> .....	489

5.24	The origin of the misleading label 'predicable' .....	491
5.25	Some notes on the title Πέντε φωναί.....	496
5.3	Other preliminaries concerning topical argument.....	498
5.31	Dialectical propositions, problems, and theses. Kinds of argument .....	498
5.32	How to become well supplied with reasonings.....	500
5.33	How to deal with multiplicity of meaning .....	502
5.34	How to notice dissimilarities and resemblances.....	504
5.35	On the usefulness of the three devices .....	505
5.4	The commonplaces regarding coincidental modes of being .....	506
5.41	The division of problem-propositions.....	506
5.42	A semantic difficulty concerning coincidental modes of being .....	507
5.43	Two more errors bearing on the semantics of naming .....	509
5.44	Some important semantic issues in the discussion of 'accident' .....	510
5.5	The commonplaces related to genus and proprium ( <i>Top.</i> IV-V) .....	518
5.51	Further implementations of the transitivity rule.....	518
5.52	Various additional rules for identifying genus and differentia .....	521
5.53	The assignment of propria .....	522
5.6	The correct statement of a thing's definiens.....	525
5.7	The practice of dialectics ( <i>Top.</i> VIII) .....	529
5.71	How to frame and arrange questions ( <i>Top.</i> VIII, chs. 1-3) .....	530
5.72	How to answer questions ( <i>Top.</i> VIII, chs. 4-10) .....	530
5.73	On bad dialectical practice and how to react ( <i>Top.</i> VIII, 11) .....	532
5.74	On clarity vs. fallaciousness of arguments ( <i>Top.</i> VIII, 12) .....	534
5.75	On begging the question ( <i>Top.</i> VIII, 13) .....	535
5.76	Various hints on training and practice in dialectical arguments ( <i>Top.</i> VIII, 14) .....	536
5.8	The <i>Sophistic Refutations</i> .....	537
5.81	Introductory remarks (SE chs. 1-3) .....	538
5.82	The fallacies depending on linguistic features.....	540
5.83	The fallacies unconnected with language .....	542
5.84	Various notes on the nature of refutation and its different types .....	547

5.85	No genuine distinction between expressions and things expressed .....	548
5.86	How to ask questions effectively .....	550
5.9	The respondent's job. How to rebut fallacious attacks.....	550
5.91	Some general remarks on how to react to fallacious attacks.....	551
5.92	The special rebuttals to the fallacies depending on language.....	554
5.93	The special rebuttals to the seven remaining fallacies.....	556
5.94	The rebuttals in connection with babbling and solecism .....	558
5.95	On the evaluation of fallacious arguments.....	559
5.96	Conclusion .....	560
	Chapter Six: The <i>Prior</i> and <i>Posterior Analytics</i> .....	562
6.1	The <i>Prior Analytics</i> . Preliminary remarks.....	562
6.11	Premiss. Term. Syllogism .....	563
6.12	The nature of the Aristotelian syllogism. Disputational necessity.....	568
6.2	Focalization and categorization in <i>Prior Analytics</i> .....	572
6.21	How to frame conclusive premisses.....	572
6.22	The proofs ἐξ ὑποθέσεως. The role of correct categorization .....	576
6.23	Some general remarks on the device called 'exposition' (ἐκθεσις) .....	580
6.24	Ecthesis as the extrication of the proper syllogistic terms.....	581
6.25	The proof by ecthesis concerning imperfect syllogisms.....	591
6.26	Some other instructions for correctly framing syllogisms.....	592
6.27	On correctly refuting your opponent's thesis.....	593
6.3	The <i>Posterior Analytics</i> .....	594
6.31	The need for pre-existent cognition .....	595
6.32	Genuine knowledge and epistemonik proof .....	600
6.33	On the notions θέσις, ἀξίωμα, ὑπόθεσις, and ὁρισμός.....	604
6.34	How to frame necessary premisses. The three requirements.....	608

6.35	On the notions 'necessary' and 'commensurate' .....	618
6.36	The starting-points (ἀρχαί) .....	628
6.37	Knowledge of the 'fact that' and knowledge of the 'why' .....	636
6.38	No knowledge without sense-perception .....	637
6.39	An infinite chain of premisses rejected. The nature of categorization .....	638
6.4	What proofs are preferable? .....	645
6.41	Universal proof is superior to one concerning an individual case .....	645
6.42	On the diverse disciplines .....	647
6.43	Sense-perception does not afford genuine knowledge .....	648
6.44	Opinion as opposed to genuine knowledge .....	650
6.5	The epistemoni process and its basic ingredients .....	653
6.51	The four steps making up epistemoni proof .....	653
6.52	On the 'mediating state' or 'middle' ('medium demonstrationis') .....	659
6.53	Substrate, attribute, and the role of definition .....	663
6.54	The vital distinction between δεικνύναι and ἀποδεικνύναι .....	671
6.55	What 'to define' comes down to .....	678
6.56	On definition, essence and existence .....	686
6.57	The different ways of 'defining' things .....	690
6.58	Did Aristotle redeem his promise of more precision? .....	700
6.59	Recipes for the discovery of definitions .....	704
6.6	Some questions concerning the 'because' device .....	714
6.61	Two different types of 'because': cause and effect ....	714
6.62	On using different 'middles' .....	719
6.7	The καθ' ὅλου requirement re-assessed .....	719
6.71	Once more, καθ' ὅλου vs. καθόλου .....	720
6.72	On the epistemoni procedure properly accomplished .....	721
6.73	The commensurate universal. Intension vs. extension .....	722
6.8	How do we apprehend the starting-points (ἀρχαί)? .....	726
6.81	On the relation between II 19 and the earlier parts of Book II .....	733
6.82	The nature of the ἀρχαί in II 19 .....	733
6.83	The ἀρχαί elsewhere in <i>Posterior Analytics</i> .....	736
6.84	No vacillation between primitive theorems and primitive terms .....	738
6.85	Νοῦς and ἔξις .....	740



6.86 Is II 19 ‘Janus-faced’, vacillating between empiricism  
and rationalism? ..... 744

6.87 Particulars as the proper objects of epistemonik proof 746

6.9 Conclusion ..... 748

## PREFACE

The present study has had a lengthy gestation. Substantial parts of it found their way into articles which for the greater part were issued in journals or collections not limited to Ancient philosophy. Their relative inaccessibility may justify the inordinate number of my own *scripta* in the bibliography.

A work like this cannot be written without great indebtedness to the substantial achievements of other scholars. Confining myself to the scholars who were of great help in the final stages of this study, the first volume in particular, I would like to extend my sincere thanks to Professors John Ackrill (Oxford) and C.J. Ruijgh (Amsterdam) — who were kind enough to read parts of it — for their criticism and encouragement. Needless to say, any remaining flaws in the book should be imputed to the present author.

My debt to the pioneering works on Aristotelian logic by Sir David Ross, John Ackrill, Jan Lukasiewicz and Günther Patzig, Hermann Weidemann, Jonathan Barnes and Wolfgang Detel is far greater than can be gathered from the references. The same holds true for the works of many other scholars whose interpretations of Aristotelian writings have in one way or another contributed to the present book. I thank Dr. Allan T. Bäck for sending me parts of (an earlier draft of) his book on Aristotle's theory of predication. I am indebted to him also for some pertinent criticism of an earlier draft of Volume I. Dr. Joke Spruyt, too, was kind enough to make useful comments on several drafts of this study.

In this book I intend to show that the ascription of many shortcomings or obscurities to Aristotle resulted from persistent misinterpretation of key notions in his work. The idea underlying this study is that commentators have wrongfully attributed anachronistic perceptions of 'predication', and statement-making in general to Aristotle. In Volume I, what I consider to be the genuine semantics underlying Aristotle's expositions of his philosophy are culled from the *Organon*. Determining what the basic components of Aristotle's semantics are is extremely important for our understanding of his view of the task of logic — his strategy of argument in particular.

In chapter 1, after some preliminary considerations I argue that when analysed at deep structure level, Aristotelian statement-making does not allow for the dyadic 'S is P' formula. An examination of the basic function of 'be' and its cognates in Aristotle's philosophical investigations shows that in his analysis statement-making is copula-less. Following traditional linguistics I take the 'existential' or hyparctic use of 'be' to be the central one in Greek (*pace* Kahn), on the understanding that in Aristotle hyparxis is found not only in the stronger form of 'actual occurrence' but also in a weaker form of what I term 'connotative (or intensional) be' (1.3-1.6). Since Aristotle's 'semantic behaviour', in spite of his skilful manipulation of the diverse semantic levels of expressions, is in fact not explicitly organized in a well-thought-out system of formal semantics, I have, in order to fill this void, formulated some semantic rules of thumb (1.7).

In chapter 2 I provide ample evidence for my exegesis of Aristotle's statement-making, in which the opposition between 'assertible' and 'assertion' is predominant and in which 'is' functions as an assertoric operator rather than as a copula (2.1-2.2). Next, I demonstrate that Aristotle's doctrine of the categories fits in well with his view of copula-less statement-making, arguing that the ten categories are 'appellations' ('nominations') rather than sentence predicates featuring in an 'S is P' formation (2.3-2.4). Finally, categorization is assessed in the wider context of Aristotle's general strategy of argument (2.5-2.7).

In the remaining chapters of the first volume (3-6) I present more evidence for my previous findings concerning Aristotle's 'semantic behaviour' by enquiring into the role of his semantic views as we find them in the several tracts of the *Organon*, in particular the *Categories*, *De interpretatione* and *Posterior Analytics*. These tracts are dealt with *in extenso*, in order to avoid the temptation to quote selectively to suit my purposes.

The lion's part of volume two (chapters 7-11) is taken up by a discussion of the introductory books of the *Metaphysics* (A-E) and a thorough analysis of its central books (Z-H-Θ). I emphasize the significance of Aristotle's semantic views for his metaphysical investigations, particularly for his search for the true *ousia*. By focusing on Aristotle's semantic strategy I hope to offer a clearer and more coherent view of his philosophical position, in particular in those passages which are often deemed obscure or downright ambiguous.

In chapter 12 I show that a keen awareness of Aristotle's semantic *modus operandi* is not merely useful for the interpretation of his metaphysics, but is equally helpful in gaining a clearer insight into many other areas of the Stagirite's sublunar ontology (such as his teaching about Time and Prime matter in *Physics*).

In the Epilogue (chapter 13), the balance is drawn up. The unity of Aristotelian thought is argued for and the basic semantic tools of focalization and categorization are pinpointed as the backbone of Aristotle's strategy of philosophic argument.

My working method is to expound Aristotle's semantic views by presenting a running commentary on the main lines found in the *Organon* with the aid of quotation and paraphrase. My findings are first tested (mainly in Volume II) by looking at the way these views are applied in Aristotle's presentation of his ontology of the sublunar world as set out in the *Metaphysics*, particularly in the central books (ZHΘ). As for the remaining works, I have dealt with them in a rather selective manner, only to illustrate that they display a similar way of philosophizing and a similar strategy of argument. In the second volume, too, the exposition is in the form of quotation and paraphrase modelled on Aristotle's own comprehensive manner of treating doctrinally related subjects: he seldom discussed isolated problems in the way modern philosophers in their academic papers, like to deal with special issues tailored to their own contemporary philosophic interest.

I hope that the reconstruction of Aristotle's semantics — 'semantics' being taken as a set of more or less consistent semantic views, rather than a system of formal semantics — as advanced in the present study as being genuinely Aristotelian will give a new impetus to the study of Aristotelian thought. It will be helpful, I trust, in settling controversial matters and clearing Aristotle of the habitual charges of obscurity, and thus providing fresh evidence for the fundamental doctrinal consistency of his work.

The translations of key passages are partly mine, partly of rather mixed parentage. I have of course regularly consulted current translations, especially *The Revised Oxford Translation of Aristotle*. In order to substantiate my own views and *modus operandi*, however, I needed on occasion very literal renderings, since many of my points required a particular phrasing of the text, approaching Aristotle's own phraseology as closely as possible. Consequently, I was forced sometimes to use offensive barbarisms, for instance, the rendering of

singular expressions such as τὸ λευκόν by \*‘the white’, instead of respecting English idiom by adding “tiresome makeweights” (Guthrie) like ‘thing’ or ‘entity’. In some instances I did not shy away from amplifying the text when it is an obvious specimen of the author’s “dangerously elliptical manner of expression” (Ackrill). In order not to overburden the footnote apparatus some explanations [in brackets] are supplied in the translations where they seemed indispensable for the less experienced reader.

The convention of writing mentioned Greek words without inverted commas has been followed. As for the other languages, single quotation marks ‘...’ are used to designate autonomous use. Double quotation marks indicate a direct quote from Aristotle or another author. Some polyvalent technical terms are often merely transliterated: ‘ousia’, ‘eidos’, ‘logos’, ‘pragma’, and the like. Abbreviations of the titles of Aristotelian writings are given in the customary way: the full titles are found in the *Index of Passages*. The *Bibliography* only includes publications that are mentioned in the footnotes.

I am very grateful to Mr Bill George for the accuracy with which he has copy-edited the two volumes of the present work and for suggesting numerous stylistic improvements. Also, I wish to express my gratitude to Brill Academic Publishers and particularly to Michiel Klein Swormink for not shying away from accepting a study of this size. Finally, I would like to thank Mrs. Gonni Runia-Deenick who was responsible for the final desk-top version. Of course, none of the people who have assisted me in one way or another is to blame for any remaining errors or shortcomings.

Mheer-Maastricht, December, 2001

## CHAPTER ONE

### PRELIMINARY MATTERS

#### 1. 1 *Aristotle the philosopher and his interpreters*

In the introduction to his *Aristotle the Philosopher*, John Ackrill aptly characterizes and evaluates<sup>1</sup> Aristotle's way of philosophizing:

Aristotle's whole approach to philosophy is open and argumentative, and not dogmatic: he claims to proceed — and to a large extent he does proceed — by raising questions, laying out problems, and trying out possible answers or strategies. [...] Aristotle often adopts a headmaster's style, and speaks with assurance as if on the matter in hand final truth has been achieved. [...] Nevertheless, through most of his work there also rings, more or less loudly, the note of caution and of questioning: much remains obscure or uncertain, the answers to one set of problems throw up new ones, on important issues arguments may seem evenly balanced. An account of Aristotle's philosophy as a set of doctrines would take all the life and liveliness out of it. It is more like a developing series of problems with a developing series of responses.

What really characterises Aristotle as a philosopher is not the number and weight of his conclusions (his 'doctrines'), but the number and power and subtlety of his arguments and ideas and analyses. [...] Aristotle's key ideas have provoked and stimulated philosophers over many centuries — precisely because they are *not* cut and dried doctrines, but can be applied and interpreted and developed in various ways.

This evaluation brings Ackrill to what he calls a rather controversial point, that it is both enjoyable and rewarding to engage in philosophical argument *with* Aristotle, and to enjoy the refinement, conciseness and suggestiveness of the master's technique and performance; not to content ourselves with a purely historical understanding of Aristotle, but rather to try to gain a better understanding of the philosophical problems he confronts. In this case, Ackrill continues, we are entitled to engage him in argument as if he were a contemporary, and need not feel guilty because we are approaching an Ancient philosopher with modern weapons. "Aristotle himself will

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<sup>1</sup> Ackrill (1981), 1ff.

not mind; we can be sure that if he is in the Isles of the Blessed he is arguing away, using all the intellectual tools that are available to him". In his peroration Ackrill phrases his "controversial point" thus:

Certainly we shall have a less pure historical understanding of Aristotle, if our minds let in twentieth-century thoughts and concepts. But why should we not make that sacrifice if we wish? It is not in itself a fault to use modern notions in discussing arguments in ancient philosophers, and to argue with them as if they were contemporaries. It is a fault (the fault of anachronism) only if one's aim and claim is to be doing purely historical work.

A controversial point indeed. One quotation from a recent study on Aristotelian explorations may suffice:

Aristotelian specialists [...] certainly need to pay due attention to the cautions emanating from literary and historical studies. This is especially necessary as an antidote to the tendency to treat Aristotle as a contemporary philosophical colleague. That tendency is, no doubt, often driven by the entirely laudable desire not just to take his work seriously, but to learn from it. But that has to be done without assuming that he is one of us (whoever 'we' are) or that his thought is somehow disembodied and timeless.<sup>2</sup>

Anyone familiar with Ackrill's learned work on Aristotle, including the aforementioned book which is intended for a broader readership, will know that the way in which he approaches Aristotle needs no antidote at all. None the less a marginal comment can perhaps be made. There is surely no harm in letting in modern thoughts and concepts when we are discussing Aristotle's philosophical achievements. On occasion, such an approach may even contribute to a sound historical understanding of Aristotle as well. However, we really should feel guilty if the stirring modern weapons we use to deal with an Ancient philosopher were to blind us to the effectiveness of the author's own tools and techniques as applied to *his* comprehension of philosophical problems at hand. If so, anachronism will jeopardize both a purely historical understanding of the author and any meaningful engagement with him. Aristotle's own anachronism in addressing Presocratic philosophy in *Met.* A by judging it on his own philosophical terms and doctrines is an omen in this respect.<sup>3</sup>

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<sup>2</sup> G.E.R. Lloyd (1996), 1f.

<sup>3</sup> Cf. Rist (1996), 359. He claims (*ibid.*) that "objections to the study of Aristotle's philosophical development raise questions about the study of Ancient philosophy as such, and at least can be taken to imply that it is a philosophically unprofitable enterprise", and seems to think (360ff.; 372) that any contextual



To my mind, much of the criticism of some of Aristotle's views, including the ways in which he raised certain problems and devised solutions (to *his* problems), lacks good grounds as a result of addressing Aristotle and *his* problems using the basic tenets of post-Aristotelian (e.g. Ammonian-Boethian) semantics. As far as Aristotle's own views of the possibilities and limits of language, and their consequences upon the issue 'Language and Reality' are concerned, there is nothing 'astonishing' about him.<sup>4</sup>

### 1. 11 *The development theory and its aftermath*

Up to the first decades of our century, Aristotle's thought, as handed down to us in the treatises we possess in their complete form, was commonly treated as a monolith, which the historian had only to systematize.<sup>5</sup> As was timely observed by Guthrie (VI, 1f.), for Christian and Muslim alike Aristotelianism was a fixed and rigid scheme of ideas, a closed system, worlds away from the tentative probing of the Socratic method; and from this assessment a corresponding idea had developed of Aristotle himself as a coldly self-consistent thinker. In the nineteenth century this hitherto dormant belief became firmly established. As Jakob Bernays put it: all surviving works of Aristotle's were written in the last years of his life, and any trace of an author who was still developing them step by step is absent; they were all written after his mature system had taken definite shape.<sup>6</sup> Small wonder then that no one had an eye for unmistakable traces of

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interpretation in using the historical, cultural, and philosophical context to explain an author's ideas, and consciously avoid restricting itself to "naked, ahistorical arguments", only exploiting an author as the repository for what may be of modern interest, must commit itself to Jaegerian developmentalism. However, to take an author's development in the context of his cultural and philosophical ambiance seriously is one thing, to think that this can only happen in terms of developmentalism is another; cf. Witt (1996), 67, n. 2.

<sup>4</sup> "*Mel.* 1017b25-26, 1049a35 [...], and at *PA* 644a30 he calls what is ἄτομον τῷ εἶδει α καὶ ἑκάστων [...]. At the same time this astonishing man can identify εἶδος as subject of definition with τὸ καθόλου ! (1036a28-29)". (Guthrie VI, 216, n. 1; see also my section 1.22, n. 29).

<sup>5</sup> I am not taking the much debated question of the tradition of the Aristotelian treatises into consideration here. Weidemann (1994, 61-8) presents an informative survey of the diverse opinions about their original purpose and divulgation, and rightly concludes (65-7) that what is known on this account leaves a series of questions open. See also the pertinent observations in Barnes (<sup>2</sup>1999), 1-69.

<sup>6</sup> *Die Dialoge des Aristoteles in ihrem Verhältniss zu seinen übrigen Werken*. Berlin 1863, 128: "Alle uns vorliegenden Werke fallen in die letzte Lebensperiode des Aristoteles [...]. Nirgends sehen wir den Baumeister noch bauen".

different stages in the evolution of Aristotle's thought, and that no one seemed to observe any genuine inconsistencies in his expositions.

After Werner Jaeger's epoch-making book on the history of Aristotle's development<sup>7</sup> was published, the previous orthodox view that Aristotle's philosophy had undergone no change or development whatsoever during his philosophical career was completely undermined, and new life was infused into Aristotelian studies. Whether in agreement with Jaeger or not, Guthrie appropriately remarks,<sup>8</sup> the predominant theme in the post-Jaeger period has been the extent to which Aristotle's philosophy did or did not change and develop during his working life.

Despite the fact that the details of the development theory are sometimes obscure, Jaeger's general position was clear enough from the outset. For one thing there is the unmistakable evidence found in Aristotle's early works (i.e. the fragmentary *Dialogues*) that as a young man Aristotle wholeheartedly sympathized with Platonism, and accepted not only the transcendent Forms but also the doctrines of immortality, rebirth and recollection that naturally go with them. For another, it is *luce clarius* from his treatises that he came to expressly renounce the belief in the existence of transcendent Forms. From these facts alone Jaeger concluded that the development of Aristotle's philosophy took the form of a steady and continuous movement away from Platonism. Hence the decisive question bearing upon any part of the Aristotelian corpus now became: How far from Plato is its philosophical position?<sup>9</sup>

In recent years the craze of development-theorist studies was severely criticized by G.E.R. Lloyd in his *Aristotelian Explorations*, in which several widespread views concerning Aristotle's methods and practices of scientific and philosophical research are challenged. In this framework Lloyd refers to the many attempts made by scholars, stimulated by Jaeger's work, to plot the changes in Aristotle's views,

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<sup>7</sup> Jaeger (1923). For some observations about the way in which Aristotle's development was dealt with before 1923 see Guthrie (VI, 3, n. 2), and particularly Berti (1962).

<sup>8</sup> Guthrie VI, 4. In this entire section I gratefully rely on Guthrie's well-balanced evaluation of Jaeger's achievement and its far-reaching influence (VI, 3-17). Cf. Wians (1996), *Introd.*, XIV.

<sup>9</sup> The slender foundations of Jaeger's main thesis are pertinently criticized by Guthrie VI, 15-7. An excellent analysis of the diverse ways in which developmental interpretations are intended by their authors is presented in Witt (1996), 67-82.

either in specific areas of his thought, or overall. He delivers his opinion thus:

Much of this work was naively conceived and poorly executed. Scholars saw inconsistencies between statements where reconciliation was not just possible, but obvious. A recurrent flaw was that the changes of heart that Aristotle was supposed to have undergone were left unexplained: scholars were content to suggest *that* his views had altered, but did not offer reasons *why* they should have done so.<sup>10</sup>

As a matter of fact, development-theorist studies are no longer in fashion. And what is more, Jaeger's achievement can be better evaluated, now Aristotle's abandonment of the doctrine of transcendent Forms is no longer mistaken as synonymous with the abandonment of Platonism.<sup>11</sup> No Aristotelian scholar is inclined to turn back to the previously orthodox view of Aristotelian thought as a monolith. Jaeger could not have dreamt of a greater success.<sup>12</sup>

However, to counterbalance this positive judgement about Jaeger's achievement, I know of no better way than to give the floor to Charlotte Witt for her well-balanced peroration (1996, 82):

[...] Psychological Developmentalism [...] is pursuing an interesting goal, but a goal that is extrinsic to the goal of establishing the philosophical meaning of Aristotle's texts. [...] the goal of figuring out Aristotle's Platonism is an important part of interpreting the philosophical meaning of Aristotle's texts, but [...] it is a goal available to both developmentalists and static interpreters of Aristotle. [...] Internal developmentalists believe that there is an inner tension in Aristotle's own texts so severe that the best way to make Aristotle's thought consistent is to invoke the hypothesis of development. There are no important differences in goal and method between an internal developmentalist interpretation of Aristotle and a static interpretation. Both aim for an interpretation that includes the largest possible number of texts in a consistent, philosophically interesting unity. But there is a difference in belief: internal developmentalists believe that it is not possible to achieve their goal without using a thesis about Aristotle's development; static interpreters believe that the appeal to development is always premature. [...] The clear contribution of developmentalism to Aristotle scholarship has been to challenge the adequacy of static interpretations especially with regard to the question of Aristotle's Platonism and the presence of incompatibilities in

<sup>10</sup> Lloyd (1996), 1. Guthrie rightly points out (VI, 15) the lack of conclusiveness in what was brought forward by Jaeger's critics.

<sup>11</sup> See Berti (1962), 323 and 328, referred to by Guthrie VI, 8.

<sup>12</sup> Cf. Guthrie VI, 4: "Returning now to Jaeger after many years, having in the meantime read many of his critics, I feel no doubt that the *Grundlegung*, the foundations, remain". Cf. Ackrill (1981), 1-4.

his thought. It is by articulating these difficulties in detail and forcefully that developmentalism has clarified and deepened the problems posed by Aristotle's texts for developmentalists and static interpreters alike.

With regard to developmentalism, Lloyd drew an interesting parallel with a similar sort of mania spreading to another area of academic study, namely in literature, where "the entire tradition of attempting to arrive at fixed interpretations of writers, past or present, came under blistering, deconstructive attack".<sup>13</sup> But whether or not they are impressed by deconstructionist views, Aristotelian specialists are still faced with seeming or real inconsistencies discovered in Aristotle's works. To some scholars it seems all but irresistible to take these inconsistencies at face value and to cut Aristotle's work into a neat and consistent pattern of ideas that can be readily labelled as different stages in Aristotle's thought.<sup>14</sup>

Most of the interpretative pitfalls are recognized in modern scholarly studies of Aristotelianism. However, we are still left with one unfortunate approach to Aristotle that has everything to do with what Lloyd has indicated as "the laudable desire not just to take his [Aristotle's] work seriously but to learn from it", and even treat Aristotle as a contemporary philosophical colleague.<sup>15</sup> Obviously this attitude will lead us to state a number of conceptual or doctrinal differences between Aristotle's and modern thought. But it has also led more than once to astonishment about some of Aristotle's conceptions and even provoked interpreters into blaming him for not sharing our modern conceptions, obvious as they seem to be in themselves.<sup>16</sup> In a similar vein modern interpreters are surprised to

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<sup>13</sup> Lloyd (1996), 1. I cannot resist the temptation to continue the quote: "Such interpretations merely reflected their authors' own hidden agenda and prejudices, and in pursuing the will-o'-the-wisp of closure, blocked, rather than stimulated, study".

<sup>14</sup> Guthrie VI, 11f. Cf. *ibid.*, 6: "If we wish to share the thoughts of a great philosopher, and his writings as they stand offer a coherent and intelligible account, there are more profitable ways of spending our lives than by picking them to pieces in a search for traces of change and development in his thought".

<sup>15</sup> Lloyd (1996), 2; Ackrill (1981), 2f., where he advocates a rewarding and prudent way of contemporary engagement; cf. above, section 1.1. This attitude is quite different from what Rist has every right to denounce (1996, 360f.) as 'reading an author creatively', i.e. to use philosophical writings for purposes more or less remote from those of their original authors, or even to appropriate such authors' names and prestige "to provide a dodgy legitimacy for novelties of one's own".

<sup>16</sup> In such cases the precursor of modern thought is blamed for his crudeness (see my next note). In this respect Aristotle's conceptions of contradiction and logical necessity among others are often criticized. Likewise Aristotle's solution to

find a lot of inaccuracies and other defects in Aristotle's works. In view of their steadfast (but not entirely undisturbed) esteem for Aristotle as a brilliant thinker they should at least take into consideration the possibility that in its tendency to take Aristotle as a serious interlocutor, modern scholarship inadvertently assumes him to be on speaking terms with us on basic logical or semantic issues.<sup>17</sup>

So much for developmentalism. In our next section I shall argue that we should accept the idea of development (and even postulate a development) in Aristotle's thought without ascribing to it more or less dramatic inner tensions, let alone elementary inconsistencies.

### 1. 12 *The general purport of the present study*

— Aristotle's philosophy cannot be regarded as something static, or a single self-contained system, but should be considered the result of a dynamic process of continual growth from its Platonic (and earlier) roots. In this sense the genetic outlook is *de rigueur* to any historian of Aristotelian thought today.<sup>18</sup> Again, from the psychological perspective, too, it is unlikely that Aristotle's philosophy should not have undergone any change or development at all from his teens at Plato's feet to his sixties in his maturity as the leader of a school.<sup>19</sup>

— While Aristotle's abandonment of his earlier belief in the transcendent Forms of Plato is an unmistakable fact, this should not be considered the same as a renunciation of any Platonic element. In fact, it is unlikely that given his long-standing membership of Plato's Academy, Aristotle should have cut off all his Platonic roots. Besides, he could only speak out his abhorrence of the Forms so frequently, and even deem what Plato had glorified as the supreme Realities to be 'a meaningless jingle of words' (*APo.* I 22, 83a33), by remaining

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his semantic problems surrounding contingent future events in *Int.* ch. 9 is commonly misconceived.

<sup>17</sup> Drawing specious modern parallels can lead (and actually led) to neglecting good evidence from the texts; Annas (1979), 2. — To be fascinated by the views of a Plato or an Aristotle in considering them as (understandably crude) precursors of modern thought, progressing in the correct philosophical direction, so that their only fault was that they did not live long enough to arrive at our degree of philosophical sophistication, is not only a token of modern arrogance (which is eloquently exposed by Rist 1996, 360f.), but will force the Ancient author to be on speaking terms with us, our terms indeed, and us to have a blind eye to *his* terms.

<sup>18</sup> Guthrie VI, 5.

<sup>19</sup> Ackrill (1981), 1: "[...] any serious understanding of his thought must allow for its *movement*, and not treat it as a mere catalogue of conclusions".

on speaking terms with the Master in many other crucial respects of philosophical doctrine, the recognition of 'the universal' in particular.<sup>20</sup>

— No student of Plato and Aristotle can deny that Aristotle was of a very different mental disposition than Plato.<sup>21</sup> Guthrie has rightly observed that to understand a philosopher's particular contribution to the history of thought one needs to be aware that the internal tendencies of a philosopher's own ideas are themselves a product of existing philosophy and its impact on his own personality and cast of mind.<sup>22</sup> When we read Aristotle's works on logic, physics, ontology, psychology, ethics, and the rest we inevitably acquire a certain familiarity with the idiosyncrasies of Aristotle's mind and personality.<sup>23</sup>

— One need not join the Jaeger camp of development theorists to acknowledge that just like that of any high-ranking thinker, Aristotle's thought too was subject to development. If it were otherwise in his case it would be unbelievable indeed. However, two things should be observed: (a) not all evolution involves abrupt breaches of a line of thought, let alone overt doctrinal inconsistencies, and (b) even if there were such ruptures, the loose composition<sup>24</sup> of the treatises as

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<sup>20</sup> In a similar vein Jaeger describes (1923, 11) Aristotle's mature period as one "in which he has learned to distinguish between the lasting essence of the Platonic heritage and whatever in its formulation was either inimitable or out of date. The latter he now seeks to be rid of, while he is at pains to preserve the essentials intact" (trans. Guthrie VI, 9). Likewise Guthrie writes (VI, 23) that in the Academic discussions the theory of Forms in its classical version was undergoing frank and lively criticism. "Not that anyone in the school thought of himself as a rebel from Plato. More probably each thought of his own opinions as offering the only reasonable defence of true Platonism. One need look no further than the *Parmenides* to see that Plato himself was as alive as any to the logical dilemmas which the theory involved etc."

<sup>21</sup> This does not mean that I join John Burnet (*Platonism*. Berkeley 1928, 56) in his verdict on Aristotle that he never understood the teaching of the head of the Academy.

<sup>22</sup> Guthrie VI, 89.

<sup>23</sup> Guthrie, *ibid.* Guthrie recommends students of Aristotelian thought should have some of Aristotle's personal traits in mind from the beginning, just "to get rid of certain preconceived notions about him which are based less on first-hand acquaintance than on others who took him over and forced him into a scholastic groove which did not fit him at all". Guthrie's splendid chapter on "The mind of Aristotle" (VI, 89-99) rightly plays a pivotal role in his own well-balanced approach.

<sup>24</sup> Ross thinks (to *APr.* II 26, 69b38-70a2) that perhaps none of Aristotle's extant works were prepared for publication. In an 'acroamatic' work sentences are possibly just notes "to remind the writer himself that the whole chapter needs further consideration". Ross refers (1949, 497) to similar cases in *APr.* (I 15, 35a2; 24, 41b31; 29, 45b19-20; 37, 49a9-10; II 21, 67b21). On the Andronican edition in general see Barnes (<sup>2</sup>1999), 24-44.

'edited' and handed down to us from Antiquity is not very reliable when it comes to speculations about developments of thought. Hence the main objective of the present study is to disclose Aristotle's philosophical doctrine as it comes about in the treatises, and to show the main stream of Aristotelian thought. It will be argued that the differences between and within the treatises are by no means unbridgeable, but should be taken as the result of the author's diverse outlooks and concerns.<sup>25</sup>

— While the peculiarities of Aristotle's mind must have had a tremendous influence on his philosophical growth and development, our understanding of his work depends on our *conception* of these peculiarities. Hence there is a real risk that our entire interpretation might be nothing but a self-supporting construction.<sup>26</sup> Therefore we should always abide by the golden rule of interpretation: our overall remarks about an author must continually stand the test of confrontation with what our author himself has to say.<sup>27</sup>

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<sup>25</sup> Bäck also (2000, 135, n.7) opts for the unitarian approach, following the sound philological principle "to try for a single, unified interpretation until encountering decisive evidence for doing otherwise"; compare the pertinent remarks in Kahn (1985) with reference to the doctrinal contents of *Met.* The different ways in which we can take a thinker's view to have 'developed' are pertinently dealt with in Algra (1996), 143-6. A remarkable confusion between awareness of development and the developmental approach is found in Modrak (1996). After a painstaking investigation of developments in Aristotle's epistemology (152-68), in which it is recognized (166f.) that "equally plausible are [...] other interpretations, which do not support the developmental hypothesis", and no unmistakable incompatibilities or inconsistencies come about, she summarizes (169): "The case for the traditionalist now looks bleak as the evidence favoring a developmental account of Aristotle's epistemology has steadily accumulated in the course of our investigation". Obviously to Modrak's own mind the 'evidence' is far from irrefutable. A similar confusion is found in Rist (1996), 373, where he says that there is no reason to assume *a priori* that it is as plausible to view Aristotle's work as "static" as to claim it as "dynamic" or "ongoing". Which traditionalist will ever deny that Aristotle's thought is dynamic and still ongoing, and thus leading to still new accounts of the fully consistent depository of his basic philosophical tenets? As soon as developmentalists feel compelled to take refuge in such positions as stereotyping their opponents as champions of the 'static' view, who deny any sort of development, they must be rather desperate. — Incidentally, a similar tactic comes about whenever the rejection of developmentalism is diagnosed as restricting oneself to the "naked argument interpretation" of Aristotle (Rist 1996, 360); see also my note 3.

<sup>26</sup> Guthrie seems to have good reason to say (VI, 89) that his advice (mentioned in my note 23) to students of Aristotle might seem like putting the cart before the horse; on closer inspection, however, it is not.

<sup>27</sup> Guthrie VI, 89f.; Ackrill (1981), 81. Patzig (1969, 151) speaks of it as 'Überweg's Maxim' ("we must always prefer the interpretation which both squares with the text and frees Aristotle from the charge of inconsistency").

— Considering the fact that authors like Plato and Aristotle believed language to be the key to unraveling the mysteries of our surroundings, we should approach them in a way that reflects this attitude; thus whatever they have to say about what they consider to be the case should be examined in the broader context of Language and Reality. Accordingly, in the present study the leading principle of interpretation as well as the strategy of argument will be to focus on Aristotle's semantics. This semantics indeed will turn out to be *the* mechanism of his way of thinking and explaining things, and should therefore be used as the key *par excellence* to understanding Aristotle's thought.

— Aristotle, and Plato as well, were skilful logicians as far as logical practice ('logica utens') was concerned; Aristotle was in addition a competent theorist of logic. In matters of semantics, things are different. Neither Plato nor Aristotle were professional semanticists, but the strategy of argument both philosophers display in their philosophical writings contains explicit evidence and unmistakable hints concerning their basic semantic tenets; this goes for Aristotle's logical writings in particular. As for Aristotle, his semantic views are prominent in *Cat.* and *Int.*, but can also be gathered from his other treatises, including *Met.*, where awareness of Aristotle's elementary semantics is indispensable for grasping the finer points of his ontology; in fact, Aristotle's strategy of argument basically depends on his fundamental semantic beliefs.

In this framework we should first and foremost deal with the general issue of Language and Ontology (1.2). It is useful, however, to precede our enquiries by a short discussion of the Greeks' search for order and explanation (λόγος), driven as they were by their desire to get rid of disorder and confusion (1.13).

Before we enter this discussion it is pertinent to briefly deal with the nature of Aristotle's writings. In a well-balanced paper on this subject Verdenius (1987) criticizes the common view that these writings are merely 'lecture notes', not meant for publication, since they often show "a fullness of expression and an attention to literary form which is incompatible with their being mere rough memoranda for lectures".<sup>28</sup> He convincingly argues (13-21) for the suggestion (18) that Aristotle envisaged readers as the ultimate addressees of his

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<sup>28</sup> For that matter, Ross holds (1960, 17) that but a few pieces (such as *Met.* Λ, chs. 1-5, *An.* III) are lecture notes. Cf. my note 24.



works, but was unable to fix his thoughts immediately in the rigid form of books.<sup>29</sup> Aristotle therefore first expressed them more loosely and tentatively in his lecture notes, but always with a view to the ideal of a finished version. On this hypothesis, Aristotle's mixed style<sup>30</sup> can be accounted for: condensed and elliptical parts alongside more finished parts with a lofty literary style that does not fit the class-room ambiance.<sup>31</sup>

A final remark is called for on the use of the term 'ontology'. This use has, of course, nothing in common with Wolffian usage, which is rightly rejected by Joseph Owens (1986, 697-700; 705) as by no means representative of what Aristotle has in mind when he speaks of the doctrine of 'being *qua* being' (τὸ ὄν ᾗ ὄν). Owens is of the opinion (700) that Aristotle's metaphysical lore should not be understood in any 'ontological' fashion, but rather put in a theological perspective, calling it (following Thomas Aquinas) 'philosophical theology'. I think Owens's position is unduly influenced by his dislike of any Wolffian idea of ontology. While this idea should be abandoned there is no reason for deeming 'ontology' a misnomer for what Aristotle means when he deals with, in Walter Lszl's words (1975, 48), "tasks belonging to an inquiry which is concerned with the interrelationship between language (or conceptual activity in general) and reality". On this view, ontology deals with the things-there-are (τὰ ὄντα) in its own special way: it is concerned with the general conditions of intelligibility of 'what-is' (τὸ ὄν) and, accordingly, with the very notion of 'being given' at all. Thus its scope basically differs from those of other disciplines, which are beings as well. Lszl has well observed (61; cf. 381) that, for Aristotle, all the investigations he explicitly assigns to ontology are interconnected and at the same time concern the conceptual apparatus necessary for making Reality intelligible and the structure Reality must possess in order that it may be talked about.

<sup>29</sup> Note *inter alia* the frequent use of ἦ, introducing an alternative explanation or correction; Bonitz *Index*, 312b57-313a26 presents a wealth of evidence for this use.

<sup>30</sup> Both styles are extensively evidenced by Verdenius (1987), 15-18, not only the terse, crabbed and convoluted phraseology he is notorious for.

<sup>31</sup> Verdenius refers (17) *inter alia* to *EN* X 7, 1177b34-1178a2. Aristotle's "dangerously elliptical manner of expression" (Ackrill) has throughout the centuries been widely observed by his interpreters, among whom Boethius and Medieval writers, who called Aristotle "turbator nominum" (see my *Index* s.n. 'Aristotle'); Ackrill (1963), 149; Guthrie VI, 103; 212, n. 3; 216, n. 1; Barnes (1975), *Introd.* XII; Bostock (1994), *Introd.* XI; Weidemann (1994), 415.

Thus Aristotle's doctrine of being *qua* being should be studied in terms of Aristotelian semantics. I can go the whole way with Leszl (despite his unfortunate use of 'logic' in the sense of 'semantics', and his talk of 'predications', instead of 'assertions'), observing (1975, 540f.) that "ontology as conceived by Aristotle, turns out to be a sort of logic, taking this word in a rather wide sense [...], namely as a concern with certain fundamental functions and structures of language (and precisely those involved in identifying objects and in making predications about them), and therefore also with the notions [...] which constitute a conceptual system which is necessary for understanding reality".<sup>32</sup>

### 1. 13 *The Greeks in search for λόγος out off χάος*

Greek philosophy may be defined as a continuous attempt to get rid of the chaotic appearances of things. Chaos (χάος) indeed vitiates certitude and self-confidence, and causes existential bewilderment. Such bad experiences can only be ruled out successfully by acquiring insight into what is fundamental in the world around us. This is why Greek philosophers looked for explanations of how things 'basically' or 'really' (ὄντως)<sup>33</sup> are and why they are as they are. To their mind, this could only be achieved by investigating the unshakable nature of things, i.e. their ontic foundations.<sup>34</sup>

Two of the Ancients' predominant assumptions should be taken into consideration. (a) To the Greek mind, seeking for an explanation of something amounts to looking for the cause of its being there. The equation of 'cause' and 'explanation' is mirrored by the concurrence of ontology and epistemology in Greek thought. (b) Real causes and real explanations must be universal. Therefore in order to

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<sup>32</sup> Also my section 7.3, item (c). Leszl (21-61) also presents an interesting survey and evaluation of the multifarious discussions about the question whether there is in Aristotle a conception of 'ontology', including the contemporaneous dispute about the problem 'whether ontology or theology'.

<sup>33</sup> Cf. Plato, *Phaedrus* 247D6-E3 (speaking about the soul's celestial journey): "While she is borne round she discerns Justice Itself, and likewise Temperance, and Knowledge, not the knowledge that is neighbour to becoming, nor the one that varies with the diversity of the things to which we in our present life ascribe being, but the true knowledge of what truly is (τὴν ἐν τῷ ὅ ἐστιν ὄν ὄντως ἐπιστήμην οὖσαν)".

<sup>34</sup> Cf. *Mel.* A 1, 982b12-19, where Aristotle says that it is through wondering at obvious perplexities that men begin, and originally began, to philosophize in order to get an orderly grasp of things.

exorcise chaos one should look for the universal, i.e., that which never fails to be there, both as an ontic cause and a 'reason why' or explanation of the things occurring in the outside world. Genuine knowledge (ἐπιστήμη), therefore, is knowledge of the universal. While Aristotle was just as keen to look for the universal as his master, Plato, was, he rejects any idea of a transcendent universal. This leads him to take the universal as an ontic cause *immanent* in ever-changing things.

Both Platonic and Aristotelian metaphysics have to overcome an almost insuperable problem. Plato's ontology is blessed with a clear point of reference: the universal cause he was looking for is located in a transcendent world; his problem, however, is how to explain the link between this sublime domain and the transient particular beings of the world underneath.<sup>35</sup> Aristotle's problem is the converse: he has to lay his hand on the universal within the very order of mutable things, and in doing so, like the Presocratics he runs the risk of focussing on the wrong immanent ἀρχή.<sup>36</sup>

To avoid any misunderstanding, right from the beginning Aristotle sets out to focus on the 'being-ness' (οὐσία < \*'ont-ia') itself in the 'things-that-are' (τὰ ὄντα). What he needs to explain, then, is the causative role ('universal causality') 'being-ness' has in particular beings.<sup>37</sup>

Aristotle's search for genuine knowledge yields the following picture. The ever-changing things of the outside world (τὰ ὄντα) *are* in many ways. Aristotle recognizes a number of changeless ontic elements in them, but he rejects Plato's view of the individual as a *rendez-vous* of participata originating from a transcendent domain of Changeless Being. Thus to Aristotle, philosophical research must consist in focussing on a thing's *immanent* 'essential elements' without somehow regarding them as independent of and separate from the concretum as a whole (as Plato could not help doing in sublimising them to something transcendent). However, even though they are not something independent, our ability to focus on a thing's essential elements entails that we can *think* them as separate and in their universal character for a while, and none the less have an eye for

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<sup>35</sup> In his later period, Plato recognized that he had to conceive of a "novel metaphysics" against the conservative 'Friends of the Forms', in order to take things of the outside world more seriously. See *Sophist* 249C10-D4; De Rijk (1986), 103-9.

<sup>36</sup> Guthrie VI, 100-5.

<sup>37</sup> An insightful discussion of this issue is found in Matthen (1988a), 151-66.

their unmistakable immanence. This is where conceptualization and semantic behaviour come in. It is these issues in particular that will be the object of the present study.

## 1. 2 *Language and ontology*

Ἀρχὴ παιδείσεως ἡ τῶν ὀνομάτων ἐπίσκεψις (Antisthenes, fr. 38 Caizzi)

“The foundation of education is the study of the names <of things>”

“You may be sure, dear Crito, that inaccurate language is not only in itself a mistake; it implants evil in man’s soul” (Plato, *Phaedo* 115E5-7; transl. Bluck)

“He who knows the names the things also knows” (Plato, *Cratylus* 435D5-6)

“Everything said metaphorically is unclear” (Aristotle, *Top.* VI 1, 139b34-35)

“what is is brought up in many ways” (Aristotle, *Met.* Γ 2, 1003a33).<sup>38</sup>

When matters of onto-logy are in order, the interrelationships between thought and language, and particularly their mutual impact, deserve special attention. First, the question of what is called ‘linguistic determinism’ should be examined. Next, *the* key term of onto-logy, εἶναι (‘be’; \*‘es-’), including its cognates will require detailed treatment.

## 1. 21 *The structural limits of language*

Philosophers and linguists alike assume that there is a linguistic correlation between language and thought.<sup>39</sup> This means that,

<sup>38</sup> *Metaph.* E 2, 1026a33-b2; K 8, 1064b15-16; N 2, 1089a7-9 and 16; cf. A 9, 992b18-20. *Phys.* I 2, 185a21; I 3, 186a24-25; cf. III 6, 206a21.

<sup>39</sup> Benveniste in his chapter ‘Catégories de pensée et catégories de langue’ (1966), esp. 73f. This parallelism is broadly acknowledged among the interpreters of Ancient thought; Graeser (1977), 360ff.; Oehler (1984), *Index* s.v. Parallelismus Sein-Denken-Sprache; Verbeke (1985), 99, 109-11; Kraus (1985); Rehn (1986), 64f.; Ax (1992), 254; Rehn (2000), 1; 97ff.; 186-90. However, *pace* Rehn (11), our use of the concept of ‘parallelism’ does not imply the assumption that Aristotle consciously takes the real and the linguistic domain to be separate. Quite the reverse, modern commentators speak of ‘parallelism’ precisely because in their view Aristotle does not oppose these two domains. In other words, Aristotle does not *say* that language and reality parallel each other, but appears to share the

e.g., Aristotle could scarcely have formulated his philosophy, especially his doctrine of the categories of being and his substance-attribute metaphysics, in the way he did, if not Greek, but some non-Indo-European language had been his native tongue.<sup>40</sup> To put things this way could be, and sometimes has been, explained in terms of a strong thesis of linguistic determinism, to the effect indeed that the concepts, tools and doctrines of Western metaphysics are simply the outcome of the projection of Greek (Indo-European) linguistic structures onto the universe. However, such a strong determinist position fails to recognize the interaction between the two. While such different thinkers as Plato and Aristotle could each in their own way avail themselves of the linguistic structures of their language, they still had to develop their own philosophy.

Discussing putative degrees of coherence and consistency in the tacit conceptual scheme of natural languages, Kahn remarks (*ibid.*, 3):

The truth is that the structure of any given language exhibits various conceptual tendencies, many of them in conflict with one another, and that different philosophers develop these tendencies in different ways. In this sense, a large number of alternative ontologies are 'latent' in the language.

Kahn (*ibid.*) may be right in regarding the task of modern philosophers as not only to bring these tendencies out into the open but to give them rational form by articulating them in systematic theories. However, as far as Ancient thought is concerned, the historian's task is to investigate the different ways in which the Ancient thinkers exploited the various tendencies (whether hidden or not) of natural language to underscore their own views of the true nature of things. Unlike modern linguistics, they were not so much interested in language itself, but concentrated on the ways in which linguistic expressions are representative of thinking and, by the same token, somehow disclose the diverse features of extra-linguistic 'reality'.<sup>41</sup>

Thus we find philosophers such as Plato and Aristotle, in their search for the true nature of things, making various attempts to

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common Ancient view that they are analogous. My section 4.11.

<sup>40</sup> Kahn (1973), 2.

<sup>41</sup> Even the Stoics (who focussed on the λεκτόν, and by doing so to a greater degree than Aristotle singled out language itself as a topic of philosophical discourse) still concentrated on the impact linguistic questions had on matters of ontology.

present certain linguistic tendencies in rational garments. And although their presentations are certainly not imperative, they may occasionally fit in rather well with these tendencies, but sometimes seem, on the face of it at least, somewhat far-fetched, or bound to stretch the structural limits of their natural language.

### 1. 22 *Deep structure analysis in Aristotle*

The way in which the Ancient philosophers handled language, or rather larded some of its basic linguistic tools, such as categorization and elementary statement-making and argumentation, led them to disclose what in their view was the underlying structure of certain basic linguistic expressions. However, unlike modern systems of transformational or generative grammar — which, as we said before, are primarily concerned with language itself — the Ancient deep structure analysis concerning our use of language aimed at disclosing the (supposed) deeper semantic level of basic linguistic expressions or tools. They were aware that expressions taken on their surface value could easily imperil our understanding of what they meant to disclose: the true nature of things.<sup>42</sup> The Ancients' appeal to deep structure is, so to speak, educational and is intended to prevent misconceptions.<sup>43</sup>

This 'deep structure' approach is not uncommon in Greek philosophy.<sup>44</sup> It was not only Plato that used to manipulate the Greek

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<sup>42</sup> This Ancient phenomenon should be explained in terms of the distinction between 'semantic meaning' and 'speaker's meaning and intention'. Bäck (2000, 12) is quite right that, on this account, it does not matter whether native speakers themselves hold a certain deep structure theory or even would agree to its adequacy for grasping the proper meaning of language. "Ordinary usage is relevant, but perhaps more important is the theory which the philosopher is trying to express by means of the natural language. The philosopher may distort ordinary usage for this end" (*ibid.*, 12f.)

<sup>43</sup> In modern grammar, on the other hand, "the deep structure of a given sentence is simply the elementary sentence form (or forms) which constitutes its source, plus the transformations by which it is derived from this source" (Kahn 1973, p. XI). In particular, on the Ancient view there is nothing of the basic tenet so characteristic of transformational grammar that one and the same deep structure level is common to all languages of the world (to the Greeks, their language was rather unique and excellent). Ruijgh (1984, 267) aptly compares the transformationalist's error with the naive conviction of older grammarians who imposed the pattern of classical Latin to their description of modern languages. The difference between the Ancients and modern linguists is crystal clear. See, e.g., the assessment of Transformational (Zelig Harris) and Generative Grammar (Noam Chomsky) presented in Seuren (1998), 227ff.

<sup>44</sup> Graeser (1977, 362ff.) presents appealing observations of the different ways

language to underpin his specific doctrinal positions;<sup>45</sup> some Pre-socratics, too, warned against taking things as they appeared at the surface level of language.<sup>46</sup> Also as far as Aristotle is concerned, historians have easily recognized 'deep structure' approaches in Aristotle's philosophical investigations, and accepted the amount of artificiality it unavoidably includes.<sup>47</sup>

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in which the problem of 'Language vs. Reality' was addressed in Antiquity. He even holds (262) that Greek philosophy is famous for its peculiar view that reality is entirely different from what we are used to thinking it is, and that this view, held in the 6th. cent. B.C., is just another way of saying that language is somehow deceptive. Rehn, too (2000, 92-108; 190-3), speaks of Aristotle's mistrust of language. One should, however, distinguish between 'surface structure' and 'deep structure'. Cf. what Rehn himself remarks (2000, 271, n. 4) and the literature mentioned there.

<sup>45</sup> Cf. de Rijk (1986), esp. 29, n. 19; 65-7; 78-81; 243-8, and *passim* (see *Index*, s.v. 'semantics'). Plato's etymologies in the *Cratylus* may also be referred to.

<sup>46</sup> Cf. Parmenides, 21B8, 50-52 (Diels-Kranz); Empedocles, 31B8 (D.-K.). Parmenides's recommendation of the 'true way of inquiry' as a remedy against the false way includes deep structure approach; e.g. his condemnation of our use of past and future tenses in Fr. 8, where the marks of 'what is' are disclosed. Guthrie II, 26-49; Graeser (1977), 362-4; cf. Annas (1979), 201-7, *ad Met.* N 2, 1088b35-1090a2; Bäck (2000), 31-40. Zeno's paradoxes against the 'surface views' of plurality and motion should also be referred to, as well as Heraclitus's rejection of the static aspects of things as e.g. suggested by the consistent meanings of names; cf. also the essential role Heraclitus assigns to the *voûs* to avoid errors due to the senses (Guthrie I, 451f.); Graeser (1977) 365f.; cf. Seuren (1998), 5-12. — Incidentally, in his review of the various views on coming-to-be and passing-away in the opening chapter of *GC*, Aristotle makes clear (I, 314b1-315a25) how Monists and Pluralists held 'deep structure' positions manipulating or even contradicting the observed facts (*τὰ φαινόμενα*). At I 2, 316a5-14, the author clearly characterizes 'deep research' as "a more intimate communion with the phenomena of nature", and opposes it to the speculations of those "who indulge in long discussions without taking the facts into account". In point of fact, Aristotle's own 'deep structure analysis' always intends to remain in close connection with surface appearances. In a similar vein, rather than rebuking the popular observations and opinions of predecessors, he re-evaluates them by opening our eyes to see the true kernel present in them.

<sup>47</sup> Not only in syllogistic (Lukasiewicz 1951, 17; Kneale & Kneale (1964), 62f.; Patzig 1969, 5-12, and n. 22); who also comments (11f.) upon Alexander's three possible explanations of Aristotle's artificiality of expression in syllogistics; see also Smith (1993), 270; Weidemann (1994), 416. Kapp calls (1942, 39) the doctrine of the categories "a due and timely attempt to differentiate [...] the at times misleading uniformity of grammatical predication". Cf. Ebert (1977), 132-7; 142; Graeser (1977), 373; Bostock (1994), *Introd.* XI (on Aristotle's "barbarisms, corresponding to nothing in ordinary Greek, and evidently used by him as technical terms"); he rightly claims (X) that the Greek of Aristotle's days was not well adapted to the thoughts Aristotle was trying to express. Barnes (1981, 42) too points out that Aristotle knew that surface grammar was not always a reliable guide to logical form; cf. Rapp (1991), 127f. Matthen (1983, 124-8) was the first to recognize that in Aristotle's perception statements such as 'The man is running' should be transformed into something like 'The-running-man is', but he brings this surmise rather hesitantly as "a somewhat conjectural suggestion"; our sections 1.51;

In this context another feature of Ancient philosophy deserves our attention, viz. its (supposed) obscurity.<sup>48</sup> Throughout the centuries Aristotle's (intentional) obscurity has been a favourite topic among his commentators. Ammonius explains (CAG IV-6, p. 77-14) Aristotle's obscure teaching thus: Just as in temples curtains are used to prevent everyone, and particularly the impure, from encountering things they are not worthy of meeting, so Aristotle uses the obscurity of his philosophy as a veil, so that good people may stretch their minds even more, and bad people are deterred. Boethius too talks of the Stagirite's obscurity and disorderly manner of speaking.<sup>49</sup> Many a Medieval writer calls Aristotle 'turbator nominum'. The 12th. cent. poet Alanus de Insulis writes in his *Anticlaudianus*: "Verborum turbator adest et turbine multos / turbat Aristotiles noster, gaudetque latere. / Sic logicam tractat quod non tractasse videtur. / Non quod oberret in hoc, sed quod velamine verbi / omnia sic velat quod vix labor ista revelat. / Qui tamen idcirco vestit sua dicta latebris / ne sua prosternens secreta suumque relinquens / arcanum mundo tandem vilesce cogat". The 16th. century author Domingo de Soto (1587, *Comm. on the Categories*, prologue) is of the opinion that Aristotle intended to deter lazy readers and, moreover, did not want to show off.<sup>50</sup>

In our days too, Aristotle is often accused of imprecise or even inconsistent usage. Guthrie, for instance, blames him for an insouciant use of language which is full of traps for the unwary.<sup>51</sup> At the same

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2.13-2.16. Bäck (2000, 130f.; 140-9; 156f.; 269; as for Plato, *ibid.*, 269) rightly speaks of Aristotle's 'protocol language'. He is right that Aristotle "regiments the language to fit his ontology" (149) and "often shows himself well aware of the limitations of the Greek language, and well inclined to modify or rearrange the language to suit his philosophical insights" (157).

<sup>48</sup> On the general subject, Mansfeld (1994), *Index nominum et rerum*, s.v. 'isagogical questions', ἀσαφεία.

<sup>49</sup> *De categ. syll.* I, 793C<sup>9-15</sup> Migne: "[...] statui ego quoque in res obscurissimas aliquem quodammodo pontem ponere [...]: si quid suo more Aristoteles nominum verborumque mutatione turbavit, nos intelligentiae servientes ad consuetum vocabulum reducamus".

<sup>50</sup> For the obscurity topic in general, see Mansfeld (1994), *Index* s.v. 'obscurity'; with regard to Aristotle, *ibid.*, 24-6; 160. Aristotle is often excuplated for his (intentional) obscurity by Greek commentators; see Mansfeld (1994), 23-5. On the other hand, Aristotle himself sometimes blames his predecessors for their vague and indefinite manner of speaking. E.g. at *Met.* A 4, 985a10ff., where he compares them to untrained soldiers in a battle, who rush about and often strike good blows, but without the proper technique (οὔτε ἀπὸ ἐπιστήμης), and even without being aware of the significance of their own statements; cf. *Met.* A 6, 988a32ff.

<sup>51</sup> V, 414, n. 1. Cf. VI, 105, n. 1; 121, n. 1; 125; 218, n.2; 326; 397. Kahn (1973, 52) censures a modern linguist (Edward Sapir) for writing carelessly and ascribes



time, however, Guthrie acknowledges that although the untidiness of Aristotle's language may annoy, its flexibility makes it a wonderful instrument compared to the resources of his predecessors, including Plato, because the ἀπορίαι that baffled them dissolve and vanish in the face of Aristotle's 'in one sense ... but in another' device.<sup>52</sup> But by calling<sup>53</sup> Aristotle "this astonishing man", Guthrie poignantly fuses his oscillating judgement about Aristotle's method and strategy of argument: Aristotle seems to provoke Guthrie's admiration and bewilderment, if not annoyance, at the same time. Anyhow, Guthrie's verdict evidences his failure to recognize that Aristotle's attitude as an investigator is deeply rooted in his semantic views, namely his belief that the multifarious ways in which we use linguistic expressions are representative of what we wish to express about the world.

To my mind, Aristotle's strategy of argument is not just a matter of temperament, and Guthrie's lucid chapter on 'The Mind of Aristotle'<sup>54</sup> can perhaps be given a more solid underpinning than psychology can afford. It is indeed Aristotle's consistent and unwavering use of semantics that is at the basis of both his scientific method and his strategy of argument. His use of the 'in one sense ... in another sense' or 'seen in one light ... seen in another' device is founded on his view of the different formal ontic aspects constitutive of a thing's being, which can, and should, be meticulously focussed on, conceptualized, and categorized by whoever seeks the true nature of the things-there-are (τὰ ὄντα).

So much for the linguistic restrictions and the options available to Western philosophers for setting up the very heart of their philosophic system, the doctrine of Being. As far as the limits of linguistic structures are concerned, it is commonly assumed that the systematic development of a concept of Being in Greek philosophy relies upon the pre-existing disposition of the Greek language to

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this to the author's "more-than-Aristotelian insouciance". Alexander of Aphrodisias (CAG II-2, p. 239<sup>14</sup>) writes: ἀσαφῶς εἴρηται διὰ βραχύτητα ὁ τόπος. Doctrinal inconsistencies are often imputed to Aristotle, for instance because of his supposed confusion of key terms such as οὐσία or εἶδος.

<sup>52</sup> Guthrie VI, 218, n. 2; cf. 205, n. 1;

<sup>53</sup> Guthrie VI, 216, n. 1; my section 13.3. It should be noticed, on the other hand, that Guthrie does not allude to Aristotle's 'astonishing' manner of arguing in his fine chapter on the mind of Aristotle (VI, 89-99).

<sup>54</sup> It is highly profitable to a good assessment and an appropriate evaluation of Aristotle's way of philosophizing to set the fine description Ackrill presents ("Aristotle at work" in 1981, 10-23) and Guthrie's chapter on the mind of Aristotle side by side.

allow a wide range of uses of ‘be’ (\*‘es-’) as well as a gamut of cognate notions to be expressed by εἶναι, ὄν, and οὐσία.

Before embarking on the examination of these pivotal terms in Greek, and particularly on how Aristotle uses them, a general remark should be made on Aristotle’s view of the representative character of thought and the linguistic tools expressing it.

### 1. 3 *Meaning and representation*

In the opening chapter of *De interpretatione*, Aristotle presents a general account of the relationships between the things we are speaking about, on the one hand, and what he calls ‘affections in the soul’ or ‘thoughts’ and spoken and written language, on the other. In this rather unspecific view the notion ‘likeness’ is pivotal:

*Int.* 1, 16a3-8: Spoken utterances are tokens (σύμβολα) of ‘affections in the soul’ [i.e. thoughts], and written marks tokens of spoken utterances. And just as written marks are not the same for all men, neither are spoken utterances. But what these [viz. utterances] are in the first place (πρώτων) significative of — affections in the soul — are the same for all people; and what these affections are ‘likenesses’ (ὁμοιώματα) of — things (πράγματα) — are surely (ἤδη)<sup>55</sup> the same.<sup>56</sup>

In this context the author is not interested in the psychological aspects of *how* thoughts may match things, which aspects he regards (16a8-9) as “not belonging to the present subject matter”, but to “the work on the soul” (i.e. *De anima*). By such psychological aspects Aristotle presumably understands the way in which thoughts taken by themselves, i.e. as mental products, come to be, irrespective of their significative function. According to Simplicius and Boethius, these aspects do not belong to the subject matter of logic.<sup>57</sup> In particular the role of images (φαντάσματα) may be meant, which, although they usually accompany thoughts, are said (*An.* III 8, 432a10-14) not to be the same as thoughts. But it is worth noticing that in *De Anima*, too the notion of ‘likeness’ as associated with ‘thought’ should not be

<sup>55</sup> Lit. ‘already’ = ‘without further discussion’. For ἤδη expressing logical proximity see Liddell & Scott s.v. 4, and my *Index* s.v. Another example is found at *Int.* 9, 19a39; cf. Ackrill (1963), 141.

<sup>56</sup> This passage is thoroughly discussed, including its different interpretations, by Weidemann (1994), 134-51, who for the predicative use of the adjective πρώτων refers to Kühner-Gerth II, 273. Pépin deals with this passage from the viewpoint of ‘symbolic relationship’ in Wiesner (1985), 22-44.

<sup>57</sup> Simplicius, CAG VIII, 104-5; Boethius I, 41<sup>11-15</sup>; Weidemann (1994), 153.

taken to mean an image or picture. So what precisely is meant by 'likeness' in this context?

The pivotal notion of *ὁμοίωμα* ('likeness') had already drawn the attention of the Ancient Greek commentators of *De interpretatione*.<sup>58</sup> The English word 'likeness', however, does not cover the entire semantic area of Greek *ὁμοίωμα*. In addition to the basic sense of 'likeness, image', 'replica', the Greek word as used by, e.g., Plato and Aristotle connotes the idea of 'being substitutable for' or 'representative of' the object the thing called *ὁμοίωμα* is said to be the likeness of, to the effect that an object's nature may be designated and clarified by its *ὁμοίωμα*.

In *Mem.* 1, 450b18-451a2 Aristotle discusses the intricate question how one can remember what is no longer present. You might as well suppose it is possible, he suggests, that we can see or hear that which is not present. He goes on to show that this is not only quite conceivable but also actually occurs in our experience. He refers to a picture painted on a panel, which at the same time is a picture and a likeness (*εἰκὼν*). That is to say, while being one and the same thing (*τὸ αὐτὸ καὶ ἓν*) extensionally, it is both of these, although the mode of being (*τὸ εἶναι*) is different. Just in the same way, Aristotle continues (450b24-27), we have to assume that the apparition within us (*τὸ ἐν ἡμῖν φάντασμα*) is something which by itself is merely an object of sight (*θεώρημα*), while in relation to something else it is also an apparition of that other thing. Now inasfar as it is regarded in itself (*ἥ μὲν οὖν καθ' αὐτό*), it is only an object of sight or apparition, but when taken as related to something of another (*ἥ δ' ἄλλου*), it is, so to speak, a mnemonic representation (*οἶον εἰκὼν καὶ μνημόνευμα*). Thus, as elsewhere *ὁμοίωμα*, the notion of *εἰκὼν* is employed by Aristotle to express the representative character of pictures and presentations.<sup>59</sup>

In *NE* VIII 10, 1160b21ff., Aristotle claims that there are resemblances between different types of political constitutions and the relationships between the members of a household. For instance, the relation between a father and his sons corresponds with a monarchy, whereas that between man and wife may stand for the aristocratic

<sup>58</sup> See Weidemann (1994), 134-51, and also Ackrill's (1963: 113f.) criticism of "grave weaknesses in Aristotle's theory of meaning". Ackrill is certainly right (114f.) in rejecting any suggestion that thoughts are 'likenesses' of things as unacceptable and in regarding such a kind of semantic model as having "caused chronic perplexity". One should find, therefore, an acceptable alternative rendering of *ὁμοίωμα*.

<sup>59</sup> Cf. *Somm.* 1, 459a14-22.

constitution, and so on for timocracy and democracy. The general idea is that the different types of household may elucidate the different natures of their respective counterparts in politics. This discussion is introduced as follows: “One may find resemblances (ὁμοιώματα) to the constitutions, and, as it were, patterns (παράδειγματα) of them even in households.” (1160b21-2)

In *Pol.* VIII 5, in which the nature of educated expression is discussed, it is argued (1340a16-17) that “there is clearly nothing which we are so much concerned to acquire and to cultivate as the power of forming right judgements, and of taking delight in good dispositions and noble actions.” With regard to the role of educated expression, Aristotle points out that *qua* representations (ὁμοιώματα) of anger, gentleness, courage and all other kinds of qualities of character, rhythm and melody are practically equivalent in their effects on our souls to the affections they represent. We know from our own experience, he argues (1340a23-25), that the propensity of feeling pleasure or pain at mere representations is not far removed from our experience of the same feelings when brought about by reality (τὴν ἀλήθειαν). So ὁμοίωμα, which is juxtaposed to μίμησις (a12) and μίμημα (a39) as their equivalent, stands for some entity that is regarded as representative of something else,<sup>60</sup> with which it has its effectiveness in common.

In *Met.* A 5 Aristotle discusses the importance attached to mathematics by the Pythagoreans, “who were the first to take up mathematics (and) not only advanced this study, but also having been brought up in it thought its principles were the principles of all things” (985b24-6). In numbers the Pythagoreans seemed to see, Aristotle argues (985b27-32), as many “ὁμοιώματα to the things that exist and come into being — more than in the traditional basic ontological elements, fire, earth and water — such and such a modification of numbers being justice, another being soul and reason, another being opportunity, and similarly almost all other things being numerically expressible.” “Since, again”, he continues (985b32-986a2), “they saw that the modifications and the ratios of the educated scales were expressible in numbers — since, then, all other things seemed in their whole nature to be modelled (ἀφωμοιωσθαι) after numbers, and numbers seemed to be the first things in the

<sup>60</sup> The genuine meaning of μίμησις and its cognates, namely ‘representation’, is thoroughly discussed in Kardaun (1993), who has convincingly shown that the common rendering ‘imitation’ is misleading; also Kardaun (2000), 137-43.

whole of nature, they supposed the elements of numbers to be the elements of all things.” In the Pythagoreans’ view, the various entities could adequately be represented by the corresponding numerical ratios. In this context too the notion of ὁμοίωμα goes beyond just likeness. Rather it expressly connotes the idea that different numerical ratios are *representative* of, and may stand for, different entities and that, accordingly, the nature of these entities can be elucidated by the corresponding number.<sup>61</sup>

To my mind, it is this pregnant connotation of representativity of the word ὁμοίωμα that is predominantly present in the opening lines of *Int.*, in which expressions are said to primarily refer to thoughts (“affections of the soul”), which, in their turn, refer to πράγματα (=‘things-being-so-and-so’).<sup>62</sup>

Aristotle uses several verbs to designate the representative character of thinking and the corresponding linguistic expressions.<sup>63</sup> Considered from the viewpoint of linguistic tools, the expressions are said to signify (σημαίνειν) or disclose (δηλοῦν) thoughts of different kinds, simple as well as compound ones. From the viewpoint of the users of language, we may say that it is by means of linguistic tools that the speaker reveals what he is thinking of. For this activity the same verbs σημαίνειν and δηλοῦν are used, as far as the bringing up of simple or compound thoughts without the speaker’s assent or dissent is concerned.<sup>64</sup> It is only if the speaker intends to make known that what he is thinking or believing is really the case (‘applies’),<sup>65</sup> that he may also use the verb ἀποφαίνεσθαι.

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<sup>61</sup> The process by which a sense organ (which is said to be potentially what the thing perceived is in actuality) is made like its object should also be understood in terms of mental representation, since Aristotle does not mean to say that the organ which has perceived a juicy apple and thus has become its like, can now physically take its place, but only that in matters of cognizance it can represent it, and happily so, because, as is claimed at *Soph. El.* 1, 165a6-9, we cannot carry around with us the objects we wish to think about, and have to use tokens (σύμβολα) for them. The representativeness of words comes also to the fore at *Sens.* I 1, 437a12-15: “Rational discourse is a cause of instruction [...], since it is composed of words, and each word is representative <of a thought>”.

<sup>62</sup> *Int.* 14, 23a32-35 and 24b1-2 are also reminiscent of chapter 1. In the opening lines of *SE* (165a6-17) the same idea of words as tokens for things is cleared up by a comparison with our use of pebbles in calculation, but the thoughts as likenesses intermediary between words and things are there omitted.

<sup>63</sup> Nuchelmans (1973), 38.

<sup>64</sup> For this use on the so-called ὀνομάζειν or onomastic level (as opposed to the περαινέειν or apophantic level) see my *Index* s. vv.

<sup>65</sup> In other words: if the expressions are used on the apophantic level.

#### 1. 4 *Charles Kahn's view of copulative 'be' as central for the uses of εἶναι*

In the next few sections, the wide range of uses of the verb 'be' (\*'es-') and the gamut of cognate notions expressed by the Greek key terms εἶναι, ὄν, and οὐσία will be considered. They will first be discussed for Greek in general, and it will be argued (against Kahn) that we should stick to the common doctrine about the use of 'be' (1.4). Next the common doctrine will be rephrased in light of some basic items of Aristotelian semantics (1.51-1.52). Then the cognate notion of ὑπάρχειν will be paid due attention (1.53). Some final remarks on the various senses of τὸ ὄν will complete our general discussion of the key terms as used in Aristotle's days (1.6).

The various uses of the verb εἶναι and its cognates is often experienced as a real stumbling-block for unadulterated thought. Philosophers of the Mill-Russell-Carnap tradition usually insist upon the diversity of meanings and functions of 'be'. The ambiguity of this notion could easily, so they thought, and in fact did seduce many thinkers to become involved in "frivolous speculations concerning the nature of Being" (Stuart Mill), or confound the various meanings of the "terribly ambiguous" word 'is'. That it can be employed for two such (putative) entirely different ideas as predication and identity is no less than "a disgrace to the human race" (Bertrand Russell).<sup>66</sup> Kahn rightly points out (1973, 4) that contemporary analytical philosophy is generally inclined to emphasize that once the various notions involved in our use of 'be' have been logically analyzed, they appear to form a heterogeneous bundle without any focal concept of 'be' to hold them together. It will be plain that to establish an unambiguous system of metaphysics must seem a chimaeric endeavour to these logicians.

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<sup>66</sup> For John Stuart Mill and Bertrand Russell see Kahn, 4; for Rudolf Carnap, Tugendhat (1966), 484 and 488. Cf. Owen's charges against Aristotle on this account (1965, 80-7). — As for Plato, Denyer rightly claims (1991, 130) that we moderns too readily presuppose that in Plato the word 'is' is ambiguous (in one sense a sign of identity, in another altogether different sense, a copula), and that modern views of the problem of Otherness in Plato's *Sophist* (255A-257C) is vitiated by this misconception. On the other hand, Denyer's arguments (130-45) for an unambiguous 'is' in Plato are rather confused. (He recommends we accept them on trust, and skips immediately to his next section). An interpretation of Otherness in Plato which is based on the categorization thesis argued for in the present study — the semantics of 'naming' rather than 'statement-making', including that there is no trace of the copula construct 'S is P' in Plato — is found in de Rijk (1986), 169-80.

However, the opposite idea is still current, to the effect that the different ways in which the Greek verb εἶναι is used surely form a unity, and that by laying bare their mutual relationships and distinguishing the various uses of the verb accordingly, we are able to unambiguously discuss the 'nature of being' and establish a system of ontology, or to disclose other people's ontology.<sup>67</sup> In my opinion, this view is the appropriate one as far as Aristotle's ontology (or Plato's or Parmenides's as well) is concerned, because many of the distinctions we are so keen on in modern times ('existence as expressed by quantifiers', 'predication' as distinguished from 'class-inclusion' and 'identity', and even Mill's contrasting the 'existential' and 'copulative' functions of 'is')<sup>68</sup> are all anachronistic and even jeopardize our understanding of Greek philosophy.

This does not mean, however, that the champions of the unity thesis, are peacefully unanimous about the nature of the semantic unity of the various uses and notions around εἶναι. Any harmony that might have existed was disturbed by the thoroughgoing study of the verb 'be' in ancient Greek by Charles Kahn.

The major theme of Kahn's study of the verb 'be' (\*'es-') in Greek is his claim that the copulative use of εἶναι (say, the finite verb 'is' in the common 'Subject is Predicate' scheme) should be central for all its various uses. He thus abandons the traditional view (Meillet, Benveniste c.s.) that the existential uses are primary, and by thus dethroning the cluster of existential uses from its privileged position and assigning it to the copula instead, Kahn believes he accomplished a "modest Copernican revolution".<sup>69</sup> He is of the opinion that the traditional theory of the Indo-European verb 'be' was seriously handicapped by the assumption that the existential uses are primary and original, the copula uses secondary and derived, and that we have to reinstate the copula construction at the centre of the system, so that all the uses can easily fall into place.

Thus Kahn analyses all the non-copulative uses in contradistinction to the copula construction. The former are semantically classified as existential (including vital, locative, and durative uses), possessive (ἐστί μοι = 'I possess'), potential (ἐστί with infinitive = 'it is

<sup>67</sup> Thus Aristotle evaluates the ontological views of his predecessors in *Met. A*.

<sup>68</sup> Including odd inventions made by modern interpreters of Aristotle, such as "the 'is' of constitution" Bostock (1994, 79) talks about.

<sup>69</sup> Kahn (1973), 395. This 'revolution' must not "remain in doubt to the extent that it purports to rewrite the history of the verb *be*" (Kerferd 1976, 63), but only concerns the history of linguistics.

possible'), and what is labelled 'veridical' (ἔστι ταῦτα οὕτω= 'this is the case'). To him, the copula construction has an unusually wide range: not only those of the εἶναι-with-predicate-noun (whether substantive, adjective, pronoun or participle) type are meant (called "the copulative construction in the narrow sense"; 87), but also those using adverbial, locative and paralocative copulas are included, as well as "mixed cases" (i.e. the overlap of nominal and locative copula, or of copula and existential force), and even impersonal constructions (87-183).<sup>70</sup> On the basis of transformational principles Kahn distinguishes three 'elementary or first order' uses: copula, possessive, and vital, to which he reduces all the others as derived or 'second order' uses. Owing to this *modus operandi*, the three ideas behind these uses are strongly affiliated, and so, without being univocal, they none the less constitute a conceptual unity. At the end of Kahn's study (400-14), a case is presented for recognizing the triple use of 'be' for predication (i.e. in the copula construction), existence, and truth ('it is the case') as a philosophical asset in Greek, which happily manages to unite concepts that are logically interdependent.

Kahn's theory did not receive a warm welcome. Theoretical linguistics have stuck to the standard account that there was no copula verb in the Indo-European *Ursprache*, and that the lexeme '\*es-' meant only 'to exist'. Kahn's counter-argument (85ff.) that in Homer the copulative construction is overwhelmingly more frequent than all other uses together is mainly based upon his purely theoretical claim (252ff.) that every existential use of εἶναι is second order, its function being — he takes it — to introduce the subject into the narrative or discourse and so "to provide a subject for the copula kernel". Along the same line of thought, the sense of the existential 'be' is reduced to the truth claim, which is said to be implied in any declarative sentence,<sup>71</sup> and thus to the sense that is recognized as characteristic of the copula. That from these purely speculative viewpoints, the copula (quasi-empirically) turns out to be central for all the uses of εἶναι and easily guarantees that the unity of the system of 'be' is predictable.

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<sup>70</sup> This inevitably leads the author to assign almost omnivalent syntactical and semantic roles to the copula (184-227), which is said, though, to have "no meaning of its own in that it contributes no independent item of information, no distinct lexical idea" (198).

<sup>71</sup> This view will be challenged in the next section.



The empirical support Kahn has adduced from pre-classical and classical Greek authors (Homer, Hesiod, Herodotus, the tragic poets, philosophers, and so on) is far from convincing. While the adherers of the common doctrine can present a wealth of evidence from the texts for the primacy of the existential use of εἶναι, and in this line of thought have no problem to account for nominal sentences such as κρείσσων γὰρ βασιλεύς (*Iliad* I, 80: "The king is more powerful", using a nominal attribute), or πὰρ' ἔμοιγε καὶ ἄλλοι (*ibid.*, 174: "There are others with me", with a locative attribute), Kahn has to explain sentences of the latter type (160; 435-52) as a pregnant use of the locative copula construction, and the former, while begging the question, as apt to "serve to illustrate [his] claim that in every case where we find the nominal sentence, the copula form *could* [his italics] appear without any difference of sense or syntax" (445, n. 23).<sup>72</sup> C.J. Ruijgh, who has convincingly refuted Kahn's main thesis,<sup>73</sup> aptly points out that the latter verse, just like the famous adage of *Iliad* II, 204-5: εἷς κοίρανος ἔστω, εἷς βασιλεύς ("Let there be one leader, one king"), nicely illustrates the easy transition from existential uses to copula constructions, rendering them "Others are also in my company" (locative attribute), and "Let only one be the leader, the king".<sup>74</sup>

Kahn's main argument for his view of the primitive copula construction is based on transformational principles. It has the following, quite clear and simple form. The view that there are two sources from which this construction should itself derive is untenable, once it is proved that (1) the nominal sentence represents merely the zero form of the copula construction, and (2) any apposition presupposes the copula construction. Unfortunately, however clear and simple this argument might be, it also begs the question in that it (a) obviously rests on unconditional, devoted adherence to transformational grammar, and (b) tacitly identifies the notions 'apposition' and 'sentence predication'.

<sup>72</sup> Because 'be' as a copula "seems to have no 'meaning of its own' in that it contributes no independent item of information, no distinct lexical idea", it "may generally be reconstructed wherever it is omitted" (198). Kahn's *parti pris* seems for the greater part to be due to his aspiration to evaluate the linguistic data *à tort et à travers* in terms of Zellig S. Harris's transformational grammar.

<sup>73</sup> Ruijgh (1979), 44-45; 57-65; (1984), *passim*.

<sup>74</sup> Other examples in Ruijgh (1979), 61ff., among which Herodotus II, 181,5: ἄγαλμα ἀπέπεμψε εἰς Κυρήνην, τὸ ἔτι καὶ ἐς ἐμὲ ἦν σόον, which can be rendered "She sent a statue to Cyrene, which was still preserved up to my time" (copulative analysis), or "... which was still there, well preserved" (existential use, with the appositional construction of the adjective).

Confining ourselves to the latter feature, the way in which the appositional construction is put aside by Kahn is quite amazing.<sup>75</sup> Contrary to our taking apposition in general as a characteristic of the archaic paratactic style in Homer, Kahn explicitly argues that appositional syntax cannot be primitive but rather presupposes a copula construction. This view forms part, he says (201), of the more general claim that any predicative construction with verbs other than 'be' or 'become' presupposes at least one of these two basic copulas. But by taking this type of 'apposition' as 'quasi-predication' (203), this argument ignores the distinction between 'attribute' and '(sentential) predicate'. So far so good, as it is dictated by transformational grammar. However, when it comes (212ff.) to describing 'predication' and the formal role of the copula, still more inadequacies emerge.

Kahn explains (212) the formal role of the copula with the help of an abstract predicative system modelled on that of logic, in which elementary sentences take the form of 'Fa' (or with many-placed functions as in 'Fab', 'Fabc' etc.), with predicates construed as 'functions' (F), and names or primitive nouns as 'arguments' (a,b,c etc.). He rightly remarks that in such a scheme there will be no distinct sign of predication (such as a copula), the predication being represented by the function-argument pattern as a whole. Apparently, Kahn fails to see that this model straightforwardly supports the opposite view of appositional syntax, reading 'Fa' as 'There is an *a* affected by the property *F*' (Kahn's 'existential construction'), or 'An-a-to-be- (or: *being-*) affected-by-the-property-F *is-the-case*'. In this view the 'be' occurring in the phrase '*is-the-case*' is to be regarded as only a sub-species of Kahn's 'existential', while that found in the infinitival or participial phrase ('*be-*affected') concerns what I will label below as the 'connotative' or 'intensional' use of the infinitival or participial forms of 'be'.<sup>76</sup> Thus the elementary forms imply Kahn's 'existential' and 'veridical' constructions, not any copula construction at all. On top of that, nothing compels us to take elementary appositional syntax in terms of copulative sentence predication as the only possible option. Therefore, *pace* Kahn (*ibid.*), if we render the notation 'Fa' into words, we should not say '*a is F*', and by putting the

<sup>75</sup> For Ruijgh's criticism see his (1979), 69-71.

<sup>76</sup> Our section 1.64. Note that this 'F(a)' is not the Fregean formula, which instead reads: 'There is a property 'F' such that it is instanced by the individual 'a'. In Aristotle, the individual ('a') is the central topic, rather than its properties.

two formally different expressions on a par, we will be doing, materially speaking, precisely the opposite of what Kahn (212-5) has in mind, because in this way we are making the copula construction the derived and second order one.<sup>77</sup>

Still another inadequacy is found in Kahn's view of predication and sentencehood. On the one hand, he rightly states (215) that "Assertion, affirmation, or 'positing' [...] is more general than predication: and this is one function expressed by the verb *be* in *Greek*", and he recognizes that "here we can no longer describe the verb as *copula*". But some pages further (226f.) he says that the concept of predication is simply the concept of sentencehood, and in the first place declarative sentencehood, which, then, is identified with "the notion of statement or *truth claim* (*italics mine*) for a sentential structure of arbitrary form<sup>78</sup> and content" (226). Kahn has obviously mistaken 'truth-value' for 'truth claim', the former of which is the susceptibility of a linguistic expression of being true or false, while its truth claim comes to its actually being asserted ('posited').<sup>79</sup> Closely connected with this misconception of the concept of sentencehood is Kahn's mixing up the notions of 'declarative sentence' (or 'statement') and 'proposition', or, to put it in grammatical terms, a finite verb construction ('Socrates is pale') and an infinitival phrase ('Socrates-to-be-pale') or a that-clause ('that-Socrates-is-pale').<sup>80</sup>

Finally, it is noteworthy to see how Kahn (1982) tries to explain why 'existence' did not emerge as a distinct concept in Greek philosophy—overrun as the notion of existence (ἔστι), as Kahn takes it, was by the primarily copulative use of 'be' (ἐστίν). He is surprisingly of the opinion (9) that this notion was never an issue; it was used, but

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<sup>77</sup> As I have argued for on several other occasions (1986, 315-26; 347-54; 1996, 131-3), there is no copula at all in Plato's and Aristotle's philosophical analyses of the elementary sentence; our sections 1.51; 2.12-2.16.

<sup>78</sup> The 'arbitrary' form, however, should not include those of non-declarative sentencehood (questions, commands, requests, wishes etc.).

<sup>79</sup> This also comes to the fore in Kahn's (1973, 190, n. 9) criticism upon Geach following Frege (1965: 449) in taking as the basic sentential concept an unasserted proposition, or "a form of words in which something is propounded for consideration". Kahn thinks that you should say 'for consideration *as to its truth*'. However, if this view of the matter is accepted, what to do, then, when you are confronted with the sentence 'You are crazy' written down on a class-room blackboard merely as an instance of a declarative sentence, quite apart from its being asserted or denied?

<sup>80</sup> It is the elementary difference between unapplied sentence (or dictum, Aristotle's 'assertible') and declarative sentence ('assertion') that is of paramount importance in Aristotle's doctrine of statement-making.

never ‘mentioned’.<sup>81</sup> Taking (15) Aristotelian categorization to be a predicative pattern serving as the primary device for analysing the things-there-are (τὰ ὄντα), and for showing how the various kinds of being are related to one another, it is “naturally the theory of predication, and not the concept of existence, which becomes the central and explicit theme of Aristotle’s metaphysics”, and thus the copulative use of ‘is’ will retain its predominant role. Concluding these counter-intuitive observations, Kahn goes on to exculpate the Ancient thinkers for causing the “philosophical disadvantage for Greek ontology” to begin with the concept of truth and reality, and to proceed by producing a (purely copulative) theory of predication and neglecting (sic!) the concept of existence as such. It seems preferable to stop imputing (following Kahn) to them any conceptual pattern alien to Greek thought and linguistics, and thus get rid of any problem of interpretation of this kind.<sup>82</sup>

### 1.5 *The common doctrine of ‘be’ rephrased in light of Aristotelian semantics*

Examining the results of my sections 1.2 and 1.3, there appears to be no good reason for dismissing the traditional view of εἶναι, viz. that (1) the lexical value ‘to be there’ is its focal meaning; (2) the notions of ‘existence’ and ‘be-the-case’ naturally derive from the focal meaning; and (3) the copula construction is nothing but a special syntactical formation, which was to become — long after Aristotle’s days, as we shall see presently — predominant in the sentence analysis in Western thought.<sup>83</sup>

All in all, there is no reason to abandon the traditional view that the existential use of εἶναι is the central one, by which all others can reasonably be explained.<sup>84</sup> In line with the traditional view, we shall

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<sup>81</sup> As for Aristotle, Kahn understandably encounters (9f.) some difficulties with *Int.* 11, 21a25ff. and *APo* I 1 (the εἰ ἔστιν question).

<sup>82</sup> On the other hand, Kahn himself recognizes (*ibid.*, 12) that “if we *begin* to interpret the concept of Being by looking for existential or copula uses of the verb, not only shall we make unnecessary trouble for ourselves, we may miss the real point; we shall fail to grasp the essential features of the Greek concept of Being”.

<sup>83</sup> Interestingly enough, Kahn (1973, 334f.) himself is well aware of what he calls “the assimilation of the veridical to the existential”.

<sup>84</sup> K. Brugmann-Delbrück (1900), 10-4 and 121; Meillet-Vendryes (<sup>2</sup>1948), & 873; Kühner-Gerth I, 3 and 42; Schwyzer-Debrunner (1950), 623f. See also Kłowski (1975), 738-46, who also criticizes Kahn’s ‘veridical idea’ (740f.); Kerferd (1976), 62-4; Ruijgh (1979), 57-65 and (1984), *passim*; Graeser (1977), 385.

establish a preliminary scheme in section 1.52 to survey the different main uses of the verb εἶναι, without any suggestion about its origin and diachronic development, let alone invoking the help of transformational or generative grammar. However we should first pay some more attention to specific points of Kahn's line of reasoning, because their refutation will afford us a more promising access to the intricacies of Aristotle's semantics.

### 1. 51 *No copulative 'be' in Aristotle's protocol language*

There is a common misunderstanding about the roots of the copula construction in Western thought.<sup>85</sup> Its favourite position in the surface structure of language is firmly based on an idiosyncratic conviction about the outside world in terms of substance-accident relationships. In this line of thought Kahn's suggestion (227) may seem fairly adequate that philosophers' deep fascination for subject-predicate analysis from the Greeks to the present day onwards is ultimately due to the fact that the analysis of sentencehood in terms of the 'Subject is Predicate' construction — an analysis that not only applies to declarative sentence but also forms the basis of all descriptive discourse — is commonly supposed to mirror the way we believe language expresses how things are. On closer inspection, however, it is not the specific subject-predicate analysis involved in the common copula construction that is ingrained in Western substance-accident ontology, but a generic substrate-attribute analysis, of which the copula construction (i.e. the noun-verb sentence pattern 'S is P') is merely one possible elaboration. However, as will be argued for later (section 2.14), this ontology can also be quite adequately represented<sup>86</sup> by the state-description 'Fa' taken as the operand of the operator 'is-true'; in my notation: 'Is: [assertible]'.

Once we have disposed of the shortcomings of Kahn's view denounced in the previous paragraphs (in the wake of Ruijgh and other linguists), the common view can be reformulated more precisely. To begin with, we have to make some indispensable distinctions. Besides, Kahn's recognition of εἶναι as a sentential variable, and so as a

<sup>85</sup> Ruijgh (1979, 68) too joins the common view of the matter by tracing the favourite copula construction back to Plato and Aristotle. It will be argued below (my section 3.35) that the philosophical analysis of the statement-making utterance in terms of copulative being dates from as late as c. 500 A.D.

<sup>86</sup> As it actually was represented in Plato and Aristotle. For Plato see De Rijk (1986), 352-4, and for Aristotle, the same (1996), 131-3, and my sections 2.12-2.15.

sentential operator, should be taken more seriously than he actually does himself. The following points can be made now:

(a) As far as sentencehood is concerned, a clear distinction should be made between the proposition (in the modern sense, = ‘dictum’ or ‘that-clause’) representing a state of affairs like ‘Socrates’s-being-pale’ or ‘that-Socrates-is-pale’, and the statement (sentence) ‘Socrates is pale’ (= ‘It is the case that Socrates is pale’).<sup>87</sup>

(b) Not only the ‘S is P’ construal but a formula of the Fregean (or quasi Fregean) ‘Fa’ type as well is inappropriate for representing Aristotle’s (protocol) analysis of the statement-making utterance, because expressions of this type are all somehow dyadic. Instead, a monadic formula containing an assertoric operator that ranges over an assertible will do the job more adequately.<sup>88</sup>

(c) Hence as far as Aristotle’s protocol language is concerned, there is no room for copulative ‘be’ at all, let alone that copulative ‘be’ should be the key notion of Aristotelian sentencehood, as Kahn, and indeed all interpreters take it to be; in fact, the notion of ‘copula’ is a mere *corpus alienum* in Aristotle’s semantics. In a similar vein, to ascribe a subject-predicate analysis to Aristotle is anachronistic, and bound to lead to wrong assumptions and conclusions.<sup>89</sup>

(d) *Pace* Kahn, Aristotelian semantics does not involve any such semantic concept as ‘veridical proper’ nor should we identify the ‘is-true’ use as a use of ‘be’ distinct from the ‘existential’ one; the veridical lexical value should be considered merely as a syntactical modification of what Kahn calls the ‘existential’ use.<sup>90</sup>

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<sup>87</sup> Peter Geach (1972, 168) deems this use of ‘proposition’ objectionable because it ousts the older, linguistic, application of the word and leaves people to grope after some substitute for that — and the substitutes they lay hold of, e.g. ‘sentence’ and ‘statement’ are obviously not good ones”. However, his plea (*ibid.*, 166-74) for the identity of ‘sentence’ (‘oratio recta’) and ‘proposition’ (‘oratio obliqua’) implies that we should take the ‘oratio recta’ as a (non-assertoric) assertible. In Aristotle’s deep structure analysis there is no room for any such confusions; our section 2.16. — It will be argued later (sections 2.13-2.16) that in Aristotle’s deep structure analysis, the ‘assertible’ functioning as the operand of the assertoric operator contains connotative, rather than copulative ‘be’ and thus differs from ‘proposition’ or ‘dictum’ in the modern sense.

<sup>88</sup> When speaking about the mistake of treating a certain analysis of a sentence as the only possible analysis, Geach (1962, 29) remarks: “Logic would be hopelessly crippled if the same proposition [Geach takes here (25ff.) ‘proposition’ for ‘sentence’ or ‘statement’] could never be analysed in several different ways”. The analysis applied in the present work will be argued for in our sections 2.13-2.14.

<sup>89</sup> The copula construction is commonly ascribed to (and what is worse, imposed upon) Aristotle by both philosophers and linguists; see e.g. Seuren (1998), 303-9.

<sup>90</sup> I prefer to speak of ‘hyparctic’; see De Rijk (1986), 348-50.

(e) There is an intrinsic relationship between the 'veridical' use of εἶναι ('is' = 'is-so' or 'obtains') and its 'existential' or 'hyparctic' use ('is' = 'exists' or 'is given'). This appears from the fact that as a sentence operator the verb ἔστι has a similar lexical stative or static value with reference to the state of affairs described by the operand (i.e. the infinitival or participial phrase) as it has in its existential use with reference to the subject of the sentence designated by the noun or nominal formation. Thus when taken from the viewpoint of syntax and semantics, the formation '[ (Socrates<sub>&pale</sub>)'s be-ing] obtains' is not substantially different from \*'Pale-Socrates-is'; the difference is merely a matter of nuance.<sup>91</sup>

### 1. 52 *A preliminary survey of Aristotle's notion of 'be'*

On the ideas conveyed by the foregoing observations, we may establish the following provisional codification of Aristotle's<sup>92</sup> philosophical perception of the main uses of εἶναι:

(1) The focal lexical value of the verb εἶναι is the commonly recognized<sup>93</sup> stative value 'to-be-effectively-there'<sup>94</sup> or 'to-be-given'.<sup>95</sup>

<sup>91</sup> Ruijgh (1979), 65. Kahn (1973, 307-10) speaks of 'existence<sub>1</sub>' and 'existence<sub>2</sub>', respectively.; cf. *ibid.*, 367-70. Cf. Lyons (1977) II, 723: "Truth is the third-order correlate of what for first-order entities is existence in space; and a statement like *That is so* (where 'that' refers to a proposition) is structurally comparable with a statement like *X exists* (where X refers to a first-order entity)". Lyons calls this "one version of a localistic theory of truth". Note that unlike some other modern languages, English is particularly inhospitable towards using the pure form 'is' to designate existence (\*'Socrates *is*') or facticity (\*'That he is lying *is*'). You can say, though, 'He *is* no more'.

<sup>92</sup> Kahn (1973), 401 has rightly observed that his linguistic analysis, in which "the fundamental form of *be* is its use as copula or sign of predication" does not match Aristotle's ontological theory, for which "the basic use of *be* is to designate 'substance' (οὐσία)".

<sup>93</sup> Kahn (1973), 388f. and 415; Kłowski (1975), 745; Ruijgh (1979), 57ff.; (1984), *passim*.

<sup>94</sup> Ruijgh (1984, 267; cf. 1979, 59) rightly underlines that the locative connotation is included in the semantic value of εἶναι, so that there is no need to add a word corresponding to the atonic 'there' in English (French atonic 'y', Dutch atonic 'er'). Nuchelmans rightly sees (1973, 29) no reason why the assertoric use of 'is' (which he takes to mean 'is really so') does not continue to be present in all cases. Also Bäck (2000), 107, n. 21; cf. *ibid.*, 22-9. Cf. Benveniste (1966), 188.

<sup>95</sup> German 'vorhanden-sein' (Karl Brugmann, *Die Syntax des einfachen Satzes im Indogermanischen*. Berlin 1925), 73; French 'être-présent' (Ruijgh, 1979, 55f.; 1984, *passim*); De Rijk (1986), 348-50. Also Kühner-Gerth I, 3 and 42, and Benveniste (1966), 160 among others. At *An.* II 4, 415b8ff. animal εἶναι is taken in the sense of 'to be alive'. As Nuchelmans well observes (1973, 29), there is reason to believe that the emphatic use of ἔστι is only a strengthening of what is normally present in all

This focal value is, I take it, most adequately indicated as ‘hyparctic’. This label has certain advantages over ‘existential’ or ‘presential’, both of which might have some (unintended) unwelcome connotations, the former seemingly connoting mere physical existence,<sup>96</sup> the latter the present time. On top of that, the label ‘hyparctic’ is beneficial in six more respects since the Greek verb ὑπάρχειν has the desirable wide range of uses: (a) it can be used to indicate the ‘being-there’ of substances as well as that of properties (whether essentially or incidentally) belonging to them; (b) it even covers the use with a predicative attribute,<sup>97</sup> as to make the label ‘hyparctic’ also a suitable mark for (real or putative) copula constructions; (c) later grammarians, such as Apollonius Dyscolus (*Syntax*, 65,13), use the term ὑπαρκτικός to characterize the verb εἶναι to contradistinguish it as ‘substantial verb’ from the other (‘adjectival’) verbs; (d) remarkably enough, it is actually used by Aristotle in his syllogistics (*APr.*) to indicate the inherence of properties (attributes) in subjects, instead of the copula construction found in the later traditional syllogistic inference schemes;<sup>98</sup> (e) connotative or intensional ‘be’, too,<sup>99</sup> can be regarded as ‘weak-hyparctic’, because it is supposed (by Aristotle) to be the ontic component of any entity whatsoever, whether substantial or accidental; and, last but not least, (f) the various senses of the Greek verb ὑπάρχειν match those of εἶναι remarkably well, to

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cases. Referring to *Int.* 12, 21b31, he interprets what is said about the addition of ‘be’ and ‘not be’ in terms of lending assertive force to the utterances in question. For the rest, owing to his sticking to the erroneous idea of ἔστιν as a copula, he is forced to deem the passage “far from clear”. Brown rightly underlines (1994, 236) that neither Plato nor Aristotle should be taken to make a difference between the ‘is’ of existence and that of predication. “When we try to understand the arguments which seem to depend crucially on the verb ‘to be’ we should beware of seeking to impose or to discern our currently favoured distinctions, for in ancient Greek the conceptual web was woven differently, and in the case of the verb ‘to be’ it was, comparatively speaking, a seamless one”. It will be argued in the present study — *ad nauseam* indeed — that the copula construal ‘S is P’ is among the anachronistic fabrics.

<sup>96</sup> For the inappropriateness of the label ‘existential’ cf. Kahn (1971), 231-4, and Ruijgh (1979), 66, who rightly prefers (58) ‘présentiel’. Cf. *ibid.*, 65: “[...] la valeur fondamentale du verbe [i.e. εἶναι] est ‘être présent’ sans spécification ultérieure. La valeur ‘exister’ (au sens étroit) n’en est qu’une application spéciale. Par extension ou par métaphore, on arrive à la valeur temporelle ‘avoir lieu’, par une abstraction ultérieure à la valeur véridicale ‘être vrai’”.

<sup>97</sup> See our section 1.53; Liddell-Scott s.v. B 4.

<sup>98</sup> Kahn’s (1973, 226), claim that in traditional syllogistic analysis the truth claim is particularized for a two-term sentence structure of the form ‘S is P’, does not hold for Aristotle’s syllogistic procedure. Our section 6.12.

<sup>99</sup> For this term see our section 1.64.



such an extent indeed that in many cases these verbs are practically interchangeable.

(2) This focal meaning can best be taken as a single fused sense of 'be' (\*'es-'), from which all uses of the verb can be understood and easily explained, without there being any need to identify one of the various uses.<sup>100</sup>

(3) Whenever the focal meaning occurs in an emphatic use of 'be' said of first-order entities, i.e. individual subsistent objects like men, trees, stones etc., including their properties, physical existence is implied; in the case of higher-order entities, i.e. perceptual and conceptual constructs (or 'intentional entities', being the objects of so-called propositional attitudes like belief, desire, expectation and judgement), such as events and states of affairs, the focal meaning (expressed by a sentence operator) is invested with referential power concerning the 'existence' or 'being-the-case' of these higher-order entities.

(4) The sentence operator ἔστι can be qualified in a threefold way: (a) by adding a negative particle, so as to frame a denial (οὐκ ἔστι = 'is-not' <true>); (b) by using the preterite or future tense (ἦν or ἔσται = 'was' or 'will be' <true>); (c) by using the imperative ἔστω ('let it be <true>'); and (d) by adding a modal operator (as e.g. in ἀναγκαῖόν ἐστι = 'it is necessary').<sup>101</sup>

(5) In his philosophical elucidation of certain crucial sentences, Aristotle remodels ('transforms', so to speak!) them into what he considers their proper meaning. In doing so, he operates with two main *syntactical* uses of 'be', which can be identified as the absolute use and the connotative use, the latter being, grammatically, the addition of 'be' to a noun or nominal formation, which from the viewpoint of colloquial grammar (or the 'surface structure'), is merely connotative or intensional; e.g. ἄνθρωπος = ὢν ἄνθρωπος ('man' = 'man-being' or 'being-(a)-man'); our section 1.64.

(6) It should be borne in mind, however, that to Aristotle, this connotative (intensional) 'be' is not just a makeweight, but a real (although non-categorical) semantic component, which, as the

<sup>100</sup> Cf. Kerferd (1976), 64, who rightly observes that on this view any idea of 'derivation' or historical development is out of the question.

<sup>101</sup> In the so-called potential construction of the finite verb *plus* infinitive (see Kahn, 1973, 292-6) found in colloquial (surface structure) Greek, the finite verb ἔστιν *alone* serves as a modal operator in the sense of 'it is possible'. It will be easily understood that for his 'transformations' Aristotle does not have this use of the verb in mind.

philosopher Aristotle in his protocol language takes it, is omitted in colloquial language (in Kahn's terminology, 'zeroed' or 'there is a "zero-occurrence" of *be*'). Therefore, from the viewpoint of grammar, it should be taken as epexegetical rather than merely parathetical.<sup>102</sup>

(7) In Aristotle's protocol language the surface-structure (or colloquial) copula construction (Σωκράτης ἐστὶ λευκός = 'Socrates is pale') is remodelled in terms of the veridical nuance of hyparctic 'be' thus: Ἔστι Σωκράτης λευκός. So the finite verb 'is' is used emphatically (at the head of the sentence) as an assertoric operator which is attached<sup>103</sup> to a participial phrase: '[Socrates's-being-pale]' or *that*-clause: '[that-Socrates-is-pale]'.

(8) In his remodelling of colloquial sentences for philosophical purposes, Aristotle readily introduces instances of the epexegetical use of (connotative or intensional) *be*' to frame the operand (i.e. the 'assertible') of the sentence operator ἔστιν. Hence his analysis seems to contain two distinct instances of 'be'. E.g. in '[(Socrates&pale)'s be-ing] *is* <true>', the former occurrence of 'be' (viz. 'be-ing' included in the assertible) is an instance of connotative (extensional) 'be', while in the latter (viz. the assertoric operator 'is') we are dealing with its strong-hyparctic use in the sense of 'positing something'.

(9) From the semantic point of view, the absolute uses (i.e. '*is*' as 'exists', and as the sentence operator) are both hyparctic in the strong sense (i.e. 'positing-something-to-be-there'), whereas the connotative (intensional) 'be' is representative of Aristotle's view that substances (Socrates, man, tree etc.), and accidents (paleness, father-

<sup>102</sup> Ruijgh (1979, 66) defines as 'parathetical' any linguistic element which is not indispensable for the semantic or syntactical integrity of a preceding expression. Kahn (1973, 245, n. 21) speaks of a grammatical dummy. As a matter of fact, Aristotle's epexegetical use of the participle ὄν (as in ὄν ἄνθρωπος) is not only grammatically superfluous, but might also cause some confusion, if it is mistaken for part of a participle construction (as equivalent of ἄνθρωπος ὄν in the sense of 'while being a man'). On the other hand, from the viewpoint of philosophical usage it is not senseless, as it appropriately discloses Aristotle's view of connotative being as the (empty) container of categorial modes of being. My section 1.64.

<sup>103</sup> The common misunderstanding to the effect that Aristotle's analysis of the statement-making utterance admits of a copula construction is entirely due to the interpreters' ignoring Aristotle's steadfast use of προσκεῖσθαι ('be attached' or 'be adjacent'; see my *Index* s.v.) whenever the finite verb ἔστι is under consideration. In Aristotle's deep-structure analysis there is never any question of ἐστίν as a connective between subject and predicate. Aristotle's deep structure analysis of the statement-making utterance will be extensively discussed in my sections 2.1 and 3.2. Matthen (1983) was the first to question the copula construction as representative of Aristotelian statement-making. See also de Rijk (1986), 315, nn. 96 and 97; (1987), 29.

hood, 'being in the Lyceum', walking etc.) also, are categorial implementations of the semantically empty<sup>104</sup> container value 'be', which by itself does not signify anything definite, and only co-signifies, i.e. constitutes a definite meaning if added to something definite.

(10) In point of fact, to Aristotle the verb εἶναι is consignificative, rather than significative, *in all its uses*, because its only proper lexical value, corresponding to its focal meaning, is saying that 'something' *is*, or is the case, leaving an empty spot for the identification ('categorization') of this 'something'. The empty spot is filled up by a thing or a state of affairs which is called to mind by a simple or composite term, respectively.<sup>105</sup> As a matter of fact, any use of εἶναι in Aristotle is a 'be something', where the 'something' is either an [x] or [y] etc., or a state of affairs or event.<sup>106</sup>

Before we deal with Aristotle's use of the notion 'be' as found in his philosophical investigations, it is useful to insert an appendix on the use of the verb ὑπάρχειν in common Greek.

### 1. 53 *An appendix on various uses of ὑπάρχειν*

The semantic area of the verb ὑπάρχειν with which we are concerned comprises a cluster of senses that come very close to those of εἶναι. Its focal meaning seems to be 'to be <already> there <as an underlying element>'.<sup>107</sup>

<sup>104</sup> The emptiness consists in the fact that for Aristotle, unlike the other (adjectival) verbs, the (substantial) verb 'be' does not give any information about the modus of a thing's 'being there', while it is precisely the other verbs as well as nouns and nominal formations that serve to implement the vague notion of 'being there'. The linguists usually indicate this feature of the verb εἶναι by remarking that it is "as insignificant as possible by itself" (Meillet-Vendryes (1948), paragraph 873; cf. Ruijgh (1979), 67f.). For Kahn's qualification of the notion 'meaningless' inasmuch as the copula is concerned, see (1973), 198, where he opposes 'to have no meaning of its own' to 'being not altogether meaningless'. Gilson, *L'être et l'essence* (Paris 1962), 275 points out that in its existential use the verb 'be' is the verb *par excellence*, not because it affirms some attribute of a subject, but because it posits the subject itself, as agent of what he calls 'the primary act of existence', and hence as a possible subject-substrate to the secondary acts signified by other (adjectival) verbs. — The emptiness of the notion 'be' is all the more conspicuous as Aristotle does not admit empty terms into his logic. Lukasiewicz (1951, 130-2); Goldin (1996) 62.

<sup>105</sup> Kahn (1973, 307-10) speaks of 'two sorts of existence', one for individuals, the other for events, properties, states of affairs. Lyons (1977, 44 Hf.) takes states of affairs as 'third-order entities'.

<sup>106</sup> For εἶναι taken by itself as acting as an empty container ('connotative be'), see our section 1.64.

<sup>107</sup> See Liddell & Scott s.v. B. The other senses are arranged somewhat differ-

(A) Quite often the verb is used with the connotation of the anterior presence ('being already there') of that which is designated by the subject term.<sup>108</sup> Common Greek offers many examples of this use.<sup>109</sup> Here are some illustrative examples:

Herodotus, *Historiae* VII, 144: "Because these ships had been made earlier, they were already there at the Athenians' disposal" (αὐταί τε δὲ αἱ νέες τοῖσι Ἀθηναίοισι προποιεῖσθαι ὑπῆρχον), viz. as opposed to the ships the Athenians were about to build.<sup>110</sup> This use is also frequently found in the Attic orators. For instance, Demosthenes, *Third Olynthiac Oration*, cap. 15: "It is action, then, that must be added, the rest is already there" (τὰ δ' ἄλλα ὑπάρχει). Another example is in the tragic poet Aeschylus, *Agam.*, 1656: "Even these ills are many to reap, a wretched harvest of woe there is already enough" (πημονῆς δ' ἄλις γ' ὑπάρχει).

Sometimes there is an additional connotation of 'to be there at somebody's disposal'.<sup>111</sup> E.g. Euripides, *Hecuba* 1229: "As a great treasury my son had been at your disposal" (θησαυρὸς ἄν σοι παῖς ὑπῆρχ' οὐμὸς μέγας). Cf. Herodotus VII, 144 quoted above. A similar connotation seems so be found in Thucydides IV, 4 quoted below, sub (C). Also Aristotle *SE* 34, 184b4.

(B) Understandably, the verb is also appropriate to mean existence ('being there') without any explicit connotation of anteriority. In this case it rather seems to imply the idea of a subject presenting itself to someone's perception.<sup>112</sup> The verb is found to have this sense quite frequently. For instance, Sophocles, *Antigone* 932: (Creon says)

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ently in Liddell & Scott. See also J.H. Heinrich Schmidt, *Synonymik der griechischen Sprache* (Stuttgart 1878; reprint Amsterdam 1986) II, 527-39 (εἶναι) and 538-41 (ὑπάρχειν). Also Zadro (1974), *Appendix* I, and Bäck (2000), 125f. — Professor Ruijgh suggests (personal communication) that Latin 'substare' might perhaps be compared to Greek ὑπάρχειν.

<sup>108</sup> Where the root 'arkh-' (with the connotation of 'being (the) first') still seems to be dominant. Properly speaking, this connotation of priority is also implied in the etymology of Latin 'praesens' = 'being already in the same place as the person who arrives'. See P.W.G. Glare, *Oxford Latin Dictionary* (Oxford, 1982), s.v. I.

<sup>109</sup> Many examples are found in Liddell & Scott, s.v. B 2. For Aristotle, e.g. *SE* 34, 183a38 and b36; *Phys.* II 2, 194a35; *Cael.* I 9, 279a13; *GA* I 7, 324b16; *An.* II 5, 417b25; *Met.* A 2, 982b23; Z 16, 1040b26; Θ 6, 1048a12 and 31; K 7, 1064a3 and 8, 1065a19; *EN* X 9, 1169b5 and X 3, 1174b30; *Rhet.* II 6, 1384a15; *Rhet. ad Alex.*, ch. 2, 1421a26.

<sup>110</sup> Some more examples of this use are found in Thucydides (E.-A. Bétant, *Lexicon Thucydideum*. Geneva 1847; reprint Hildesheim 1961, 469-70).

<sup>111</sup> Cf. Latin 'praesens' in 'deus praesens', 'praesens auxilium'.

<sup>112</sup> As is also the case with Latin 'ex(s)istere'. See below, at the end of this section.

“Ululation there will be” (κλαύμαθ’ ὑπάρξει); Pindarus, *Od. pyth.* IV, 205: “A russet herd of Thracian bulls they found at hand” (φοίνισσα δὲ Θρηκίων ἀγέλα τάρων ὑπῆρχεν).

In this nuance the verb can be used in a threefold way: (1) to refer to the presence of something subsistent; (2) to denote the presence of something inhering in something else, and (3) to designate (there being) a state of affairs, or the (factual or possible) occurrence of an event.

Re (1): This use is found in cases such as sub (A) and (B). Often there is also the connotation of real presence, as opposed to sheer appearance (φαίνεσθαι). See Liddell & Scott s.v. B 3; Bonitz, *Index* 789a1-4; for Aristotle e.g. *Met.* Z 16, 1040b27.

Re (2): In these cases the verb is construed with a dative, and said of properties and the like, and means ‘to belong to’, ‘to fall to’, ‘to accrue’. Liddell & Scott s.v. B 5 III. For instance, Antiphon, *On the murder of Herodes*, cap. 60: “He possesses the same things as I do” (ταῦτ’ ὑπάρχει αὐτῷ ὅπερ ἐμοί); cf. Lysias, *Against Eratosthenes*, cap. 23. Plato, *Theaet.* 150B5-6: “To my art of midwifery generally the same attributes belong as to theirs” (τῇ δέ γ’ ἐμῇ τέχνῃ τῆς μαιεύσεως τὰ μὲν ἄλλα ὑπάρχει ὅσα ἐκείναις); *Phil.* 58C5-6: “[...] conceding that to his art the property falls of doing paramount service to mankind” (τῇ μὲν ἐκείνου ὑπάρχειν τέχνῃ δίδους πρὸς χρείαν τοῖς ἀνθρώποις κρατεῖν).

Aristotle frequently uses the verb to indicate the inherence of a property in a substance. See Bonitz, *Index*, p. 789a12-b4, e.g. *An.* II 2, 413a33; *Met.* A 2, 982a22 and 31; α 2, 996a22. In *APr.* I 4, 25b37-26a4 (and elsewhere in his syllogistics) we find the standard phrase A ὑπάρχει B = ‘A falls to B’ or ‘B=A’ is found; see *ibid.* and I 37, 49a6-9;<sup>113</sup> Bonitz, *Index*, p. 789a30ff. In a similar vein the phrase ὑπάρχειν with a dative is equivalent to κατηγορεῖσθαι with a genitive; see *APr.* I 5, 27a3-9 and *passim* in the *Analytics*.<sup>114</sup> The construction of ὑπάρχειν

<sup>113</sup> This text is also important for understanding the semantics of Aristotelian statement-making in terms of attribution: “The expressions ‘This falls to that’ (τὸ ὑπάρχειν τὸδε τῷδε) and ‘This is truly said of that’ (τὸ ἀληθεύεσθαι τὸδε κατὰ τοῦδε) must be understood in as many ways as the various ways of naming (κατηγορίαι) are divided, and these ways of naming must be taken either with or without qualification (ἢ πῇ ἢ ἀπλῶς), and further as simple or compound (ἀπλῶς ἢ συμπελεγμένως); and the same goes for ‘This does not fall to that’”. Cf. I 36, 48a40-b4. — I cannot see why Bäck (2000, 110; 114-6) takes the verb ὑπάρχειν as a copula and, accordingly, thinks Aristotle “to move towards having a tripartite analysis of a statement consisting of subject, copula, and predicate”.

<sup>114</sup> Bonitz, *Index*, p. 377b9-12; cf. 33-34; 789a30-41.

with κατά is found syncretistically at *Int.* 3, 16b10-15 and *APr.* II 22, 67b28.

Re (3): In such cases it is not a property that is said to fall to somebody or something, but an event or a state of affairs. For instance, Thucydides IV, 18: “[...] we erred in judgement, a situation in which the same thing equally falls to all people” (ἐν ᾧ πᾶσι τὸ αὐτὸ ὁμοίως ὑπάρχει). There is only one step from this use of ‘falls to somebody’ to ‘may or can fall etc.’ Thus Thucydides, I, 82: “[...] a war of which it is impossible to know the issue” [lit. ‘to foresee does not exist’] (πόλεμον [...] ὃν οὐχ ὑπάρχει εἰδέναι καθ’ ὅτι χωρήσει). *Ibid.*, VII, 63: “It is still possible for us to be victorious” (ὑπάρχει δ’ ἡμῖν ἔτι νῦν γε [...] ἐπικρατεῖν). Cf. Plato, *Phaedo* 81A4; *Prot.* 345A5-6; *Phaedrus* 240B5-6.

In Plato, *Phaedo* 86C3-6, the modal connotation ‘necessarily falls to’ is found: “[...] as soon as the tension of our body is lowered or increased beyond measure, the soul must be destroyed (τὴν μὲν ψυχὴν ἀνάγκη εὐθὺς ὑπάρχει ἀπολωλέναι), divine though it is”.

Likewise, the phrase τὰ ὑπάρχοντα is used in the sense of ‘state of affairs’. Thus the expression τὰ ὑπάρχοντα often occurs in the sense of ‘the present resources’ or ‘the present situation’.<sup>115</sup> E.g. Thucydides IV, 18: “With the usual resources at our disposal (ἀπὸ δὲ τῶν αἰεὶ ὑπάρχοντων), we only erred in judgement”. *Ibid.*, VII, 76: “He encouraged the soldiers as well as the circumstances permitted” (ἐκ τῶν ὑπάρχοντων ἐθάρσυνε); cf. VIII, 1, and VI, 31 and 33.

In the same semantic area, the finite verb’s senses as well as those of the participle ‘to be laid down’, ‘to be taken for granted’, ‘to be regarded as true’ are found. Thus Sophocles, *Electra* 1340: “Right well, the fact is that *you* nobody knows” (καλῶς ὑπάρχει γὰρ σε μὴ γνῶναι τινα). Other examples are found in Plato, *Symp.* 198D4; *Tim.* 29A8-B2; 30C2; *Rep.* V, 458A5-6.

(C) The manner in which something is existent or at hand is sometimes indicated by a participial construction of ‘be’, or another verb. E.g. Herodotus I, 192: “Such a fortunate state was available for the governor of Babylon” (τοιαῦτα μὲν τῷ ἄρχοντι τῆς Βαβυλῶνος ὑπῆρχε ἔόντα), viz. the state the conquerors happened upon. Likewise Demosthenes, *Against Meidias*, cap. 38: “Polyzelus again explained that owing to his ungovernable temper he had lost his head when he committed the offence; he was not present there as an *old* enemy (οὐ

<sup>115</sup> Bétant, *loc. cit.*: ‘id quod habemus’.

γὰρ ἐχθρός γ' ὑπάρχεν ὦν)". This construction occurs also in Aristotle. E.g. *Met.* Z 17, 1041a15: "That there actually is a certain state of affairs must be clear beforehand" (δεῖ ... ὑπάρχειν δῆλα ὄντα); *EN* VIII, 12: "[...] inasmuch as brothers are closer to each other, and start loving each other from birth" (ὅσῳ οἰκειότεροι καὶ ἐκ γενετῆς ὑπάρχουσι στέργοντες ἀλλήλους); *Poetics* 10, 1452a12-14 (where the verb's connotation is corroborated by the adverb εὐθύς): "Plots are either simple or complicated, since for a start, the actions they represent are of this twofold nature"; lit.: "[...] are at their basis, being of such a nature" (ὑπάρχουσιν εὐθύς οὕσαι τοιαῦται); *Meteor.* I 3, 340a16-17: "[...] just as would be the case if they [i.e. the elements] were there, originated from one another"; *PA.* I 1, 640a22-23: "[...] ignoring the fact that creative seed must be already there, endowed with such a power" (ὑπάρχειν τοιαύτην ἔχον δύναμιν).

Sometimes when a participle is missing, we find an appositional construction of an attribute, which seems to come close to a copulative use of the verb. For instance, Thucydides IV 4: "The greater part of the place was there, strong by itself (τὸ γὰρ πλεον τοῦ χωρίου αὐτὸ καρτερόν ὑπῆρχε), and had no need of a wall". In such cases the copulative rendering of the verb is a reasonable alternative: "The greater part [...] was strong by itself". Xenophon *Oeconomicus* XXI, 11 presents a case in which the verb is followed by a *genitivus qualitatis* "This cannot be learnt at sight or at a single hearing. On the contrary, to acquire these powers a man needs education; he must already be of a good natural disposition (φύσεως ἀγαθῆς ὑπάρξει)". Note that the connotation of anteriority is clearly involved.

We also come across ambivalent constructions like the foregoing in Aristotle, constructions, that is, in which the verb's basic meaning is clearly present, but which also allow a copulative construction in which the apposition can be taken as a predicative noun; see Bonitz, *Index* 788b53-58.<sup>116</sup>

<sup>116</sup> Ruijgh refers (1979, 61) to a similar ambivalent construction concerning εἶναι, e.g. Herodotus II, 181: [...] ἄγαλμα ἀπέπεμψε ἐς Κυρήνην, τὸ ἔτι ἐς ἐμὲ ἦν σόον ("She sent a statue to Cyrene, which was there still at my time, well-preserved" (appositional construction), or (copulative construction): "... which was still extant at my time". Ruijgh refers for this appositional construction to P. Chantraine, *Grammaire homérique. II Syntaxe* (Paris 1953), 12ff., and Schwyzler-Debrunner, *Griechische Grammatik. II Syntax und syntaktische Stilistik* (München 1950), 613ff. No doubt, the two constructions may be distinguished by different intonation and punctuation (Ruijgh, *ibid.*).

*Nota bene*: (1) The grammarian Apollonius Dyscolus (2nd cent. A.D.) uses the adjective ὑπαρκτικός for certain verbs (viz. εἶναι and cognate verbs) to designate their property of expressing a subject's subsistence or existence; e.g. *De syntaxi* 65, 13: τὰ ὑπαρκτικὰ τῶν ῥημάτων. At 151, 13 the phrase ὑπαρκτικὴ μετοχή is used of the participle ὄν. (2) The use of the substantive ὑπαρξίς is of an earlier date. It is used by the philosopher Philodemus (1st cent. B.C.) speaking of the real existence of the god (*De pietate*, I 627-8 ed. Obbink).<sup>117</sup> Plutarchus opposes ὑπαρξίς to νόησις (II, 1067C). The Greek commentator Ammonius (c. 500 A.D.) has the term in his commentary on *Cat.* (passim) to refer to the presence of a categorial mode of being in a substrate. Apollonius Dyscolus (*De pronomibus*, 25, 2) has the expression τὰ τῆς ὑπάρξεως ῥήματα as an equivalent of τὰ ὑπαρκτικὰ ῥήματα.

There is an interesting use of ὑπαρξίς in Simplicius's commentary on *Phys.* In a comment upon motion and its being measured by Time, it is implied that according to a well-known Peripatetic saying, real existence (τὸ εἶναι) 'stretches' what is signified by a form from mere potentiality into actuality (ἐνέργεια τοῦ ὄντος). The idea of 'stretching' or extending ('elongating') potential being into actual being is expressed by the phrase παράτασις τῆς ὑπάρξεως, meaning, I take it, that when attached to a name that is significative of a form and by itself merely conveys its potential existence, 'be' (τὸ εἶναι) upgrades it to actuality. It is, Simplicius argues on behalf of Aristotle, motion actually being given which is measured by Time.<sup>118</sup> Plainly, the verb ὑπάρχειν primarily conveys existential import.<sup>119</sup>

(3) As for the Latin verb 'ex(s)istere', its basic meaning is 'to step out', 'to emerge'. Kahn (1973, 232) is right in pointing out that the aspectual value of the Latin verb is essentially punctual and

<sup>117</sup> *Philodemus on Piety. Part I. Critical Text with Commentary* (Oxford, Clarendon, 1996). The substantive is taken to be of Stoic origin (Obbink, 370).

<sup>118</sup> CAG IX, p. 735<sup>31-36</sup>: Δῆλον δὲ ὅτι ἄλλο τοῦτο ἐστὶ τὸ εἶναι παρ' ἐκεῖνο τὸ συνήθως ὑπὸ τοῦ Περιπάτου λεγόμενον καὶ τὸ εἶδος σημαίνει· τοῦτο γὰρ τὴν παράτασιν τῆς ὑπάρξεως καὶ οἶον τὴν τοῦ ὄντος ἐνέργειαν δηλοῖ. ἐπεὶ οὖν ἡ τῆς κινήσεως οὐσία ἐνέργεια ἐστὶ παρατεταμένη (ἐντελέχεια γὰρ ἦν τοῦ κινητοῦ), εἰκότως ταῦτόν ἐστι κίνησις [i.e. actual motion] καὶ τὸ εἶναι τῆς κινήσεως. Some lines before we read (*ibid.*, lines 27-28) that the way in which Time measures motion is measuring it κατὰ τὴν τοῦ εἶναι παράτασιν αὐτῆς, καθ' ἣν μάλιστα καὶ ὑφέστηκεν. See also our section 1.64.

<sup>119</sup> Cf. Bäck (2000), 125-8. Note that unlike the verb, the noun ὑπαρξίς seems to be ambivalently used for both weak and strong hyparxis; cf. the use of 'be' both for connotative ('intensional') and assertoric being; our section 3.37.



emergent, while that of the Greek verb εἶναι is durative. However, his suggestion that ‘existit’ should point to “the appearance of novelty set in relief against the darker background out of which things come” must not be understood (as Kahn seems to take it, in the wake of Etienne Gilson, whom he refers to)<sup>120</sup> in terms of originating and coming into being. I really doubt whether the notion of ‘origin’ is semantically predominant in ‘existere’.<sup>121</sup> We should rather take ‘to emerge’ primarily in the cognitional sense of ‘appearing out of a (darker or more vague) background’, so that the verb has a semantic affinity with ὑπάρχειν in its sense of ‘being there’. Thus the transition from ‘appearing’ to ‘being in existence’ or ‘existing’ is quite understandable.

### 1. 6 Εἶναι and its cognates in Aristotle’s philosophical investigations

The verb ‘be’ has often caused a fatal misunderstanding in that it seduces interpreters of *Met.* to render it ‘to exist’.<sup>122</sup> But the verb can just as well indicate a thing’s presence in the mind. The formal object the metaphysician is concerned with is ‘being *qua* being’ (τὸ ὄν ᾗ ὄν), in the two senses of ‘be’ admitted by Aristotle for the present enquiry, namely ‘be’ as it is differentiated into the ten categories, and into potential and actual being; the material object is the thing of the outside world he is talking about. Despite the adamant fact that throughout his discussions the proper object of Aristotle’s metaphysical inquiry is the domain of particular existents, the metaphysician is

<sup>120</sup> E. Gilson, *L’être et l’essence* (Paris 21962), 16: “*Ex-sistere* signifie donc [...] moins le fait même d’être que son rapport à quelque origine”. Although Gilson rightly observes (*ibid.*) that the verb’s focal meaning is ‘paraître, se montrer’ he seems to regard (16-8), following the Medieval interpretation (“*existere est ex alio sistere*”), the ontological sense (‘to originate’) as the basic one, rather than the cognitional sense (‘to appear’, ‘to present itself to the senses’).

<sup>121</sup> See Glare, *Oxford Latin Dictionary*, s.v. 1a: ‘to come into view’, ‘to appear’. See below, at the end of this section. E.g. Lucretius, *De rerum natura* II, 796: “neque in lucem existunt primordia rerum”; Caesar, *De bello gallico* VI 26, 1: “est bos [...] cuius a media fronte inter auris unum cornu existit”; Cicero, *De divin.* I, 130: “[...] si obscurior et quasi caliginosa stella exstiterit”; Id. *Ad Atticum*: “timeo ne in eum existam crudelior” (“I am afraid that I might show myself [lit. ‘come about as’] a bit relentless towards him”).

<sup>122</sup> Ross, Tredennick, Kirwan, Bostock, Guthrie (VI, 204, n. 1) rightly rejects Düring’s use of ‘existence’ and ‘existent’ (1966, 586; 597), but still calls this use “tempting”. However, by giving in to this bad temptation, Kirwan (1971, 76-81) became baffled by a number of non-problems.

as such not interested in their actual existence but rather in their ontic conditions, including, admittedly, the preconditions of existence. The particulars are considered because of their possession of ontic forms, but the latter can be examined regardless of their actually being enmattered. Thus genuine knowledge, and metaphysics in particular, do not bear on matters of existence or non-existence, but concern the primary cause and explanation of any existent or possible thing. The question of existence and non-existence belongs to the department of sensorial cognition. Even the reason why Guthrie resists<sup>123</sup> the temptation to use the renderings 'existent' and 'existence', viz. that they do not cover the whole semantic area, is somewhat misleading. What is properly at stake in metaphysics is the enquiry into the true ontic values of things, which, to Aristotle eventually (*Met.* Z-H) are their immanent dynamic powers invested in the forms (εἶδη).

The focal meaning of εἶναι comes to the fore either in the articular participle (τὸ ὄν), which is used to stand for concrete particular beings, or in the substantive noun οὐσία, which primarily<sup>124</sup> refers to the property of 'being-ness', i.e. that element in virtue of which something 'is', (in Aristotle's words: 'the cause of being', *Met.* Δ 8; see below); secondarily the substantive can also stand for particular beings if they are brought up especially in view of their being a substrate endowed with this or that mode of being-ness.<sup>125</sup>

### 1. 61 Τὸ ὄν and τὰ ὄντα

The two expressions 'what-is' and 'the things-there-are' translate the Greek phrases τὸ ὄν and τὰ ὄντα, respectively. To assess the philosophical use of these terms some remarks should be made on the nature of metaphysical inquiry in Aristotle.

What is distinctive of Aristotle's metaphysics is the coalescence of two forms of metaphysical abstraction: one is merely formal, by which a thing's being (form or ontic cause) is *taken apart* from its

<sup>123</sup> VI, 204, n. 1: "It is tempting to use 'existent' and 'existence' (cf. Dühring (1966), 586, 597), but [...] existence is only one of the senses which it [τὸ ὄν, de R.] covers".

<sup>124</sup> That in his enumeration of the different uses of οὐσία in *Met.* Δ 8, Aristotle begins with its secondary senses is quite understandable, as this is usual in Book Δ, which is commonly characterized as a practical 'Lexicon'.

<sup>125</sup> This is why in *Met.* Z 2, substrate (ὑποκείμενον) can be introduced as a possible candidate for being the true οὐσία.

actually inhering in a particular, and the other represents a degree of abstraction in which this immanent form (ontic cause) is taken together with its inherence in matter, as a result of which the particulars appear in such a way that their 'material constitution' (Ackrill) or 'condition of materiality' is included. On the whole, Aristotle's metaphysical investigation is intended to arrive at that special focalization that enables us to apprehend the particulars qua beings, that is to say, under the specific aspects of *their* mode(s) of being.

As to the precise sense of the expression τὸ ὄν ('that-which-is' or 'what-is'), its grammatical form should be paid due attention to first. In its nominalized form, the verb 'be' is used as an articular participle (τὸ ὄν) and as an abstract noun (οὐσία). It is mainly in these forms that the verb 'be' played an important role in Ancient philosophical reflection.

The article-plus-participle phrase τὸ ὄν, which consists of the definite article and the neuter form of the present participle of the verb εἶναι, can be compared to common Greek article-plus-adjective phrases, quite current in Greek since the Presocratics, such as τὸ ὑγρόν, τὸ θερμόν, τὸ λευκόν for 'the moist', 'the hot', \*'the white' or 'what is white', respectively.<sup>126</sup> As for the philosophical use of such adjectival phrases, any reader of Plato's dialogues will be familiar with the expressions by which Plato usually indicates the essential (either transcendent or inhering) properties or essences of the things of the outside world (like τὸ καλόν = 'the beautiful', τὸ δίκαιον = 'the just', meaning 'that-which-is-beautiful' or 'what-is-beautiful' etc.). In fact these expressions can be taken in two senses, signifying either a thing itself possessing the property at hand, or this property taken by itself (the Beautiful or Beautifulness).<sup>127</sup>

The articular adjectival phrase is used in a similar way. Thus τὸ βαδίζον means 'that which is walking' or 'the walking' <thing>. Accordingly, the articular participle τὸ ὄν can be used to stand for 'what *is*' or 'that which *is*' in the focal hyparctic sense of 'be'. Thus in

<sup>126</sup> Unlike Greek (and Latin, German, and Dutch), English grammar requires the addition of such "tiresome makeweights" as 'thing', 'entity' (Guthrie V, 404, n.1).

<sup>127</sup> It should be noticed that this manifold use does not give rise to sheer ambiguity, but rather mirrors the occurrence of two complementary ontic aspects, either of which can become predominant in a certain context. In Plato's 'novel metaphysics' the twofold sense/aspect item plays a decisive role; see de Rijk (1986), 103ff. For the semantic background of this issue see section 1.72.

principle τὰ ὄντα indiscriminately means ‘the things that are present in our world’ or ‘the facts’ or ‘states of affairs’, and πάντα τὰ ὄντα usually refers to all the things there are, in particular if their physical presence or reality should come to the fore. Kahn is perfectly right in observing<sup>128</sup> that Greeks did not make any sharp distinction between states of affairs or ‘facts’ designated by an infinitival phrase or a *that*-clause on the one hand, and individual objects or entities on the other. For Greeks, both types of ‘things’ counted as ‘beings’.<sup>129</sup> Thus τὰ ὄντα may mean ‘that which is the case’ as well as ‘that which is’ said of objects. Likewise the phrase τὸ ὄν is used to stand for ‘the truth’ or ‘the real state of affairs’.<sup>130</sup> Particularly Aristotle is aware of the different senses in which we use the word ‘be-ing’: (1) ‘categorical be-ing’, (2) ‘coincidental be-ing’, (3) ‘be-ing as truth’, and (4) ‘actual’ as against ‘potential be-ing’.<sup>131</sup>

It is useful to emphasize that, just as an articular phrase like ‘what is beautiful’ (τὸ καλόν) can be taken both in the sense of ‘the beautiful thing’ and in that of ‘the property of beauty’ (‘beautifulness’) of the beautiful thing, so τὸ ὄν can both indicate the entity that *is* in any way and designate the specific feature of be-ing.<sup>132</sup> Thus one can easily understand the pregnant use of the phrase τὰ ὄντα in some philosophical texts in which the context suggests that elementary ontic elements or powers are meant, such as earth, water, air, and fire, or hot and cold, dry and wet — entities, that is, which *are* in a special, privileged sense.<sup>133</sup> In this line of thought, Aristotle’s τὸ ὄν ᾗ ὄν (‘what *is* as such’) becomes a comprehensible device in his search for ‘true Being’.

<sup>128</sup> Kahn (1973, 457) says on account of ‘facts’ and ‘things’: “[...] if we recognize some interaction between the old use of the participle [sc. τὰ ὄντα] to refer to acts or events and the new use to designate whatever things there are in the world, this will help us to understand the persistent Greek refusal to make any sharp distinction between states of affairs or facts with a propositional structure, on the one hand, and individual objects or entities on the other. For the Greeks, both types count as ‘beings’”.

<sup>129</sup> Unlike modern languages, Greek grammar allows the use of the finite verb ἔστι (as well as its synonymous counterpart ὑπάρχει) by itself to stand for ‘there being an entity’ (e.g. ‘pale Socrates *is*’) and a state of affairs like ‘Socrates-to-be-pale’ or ‘Socrates-being-pale *is* <the case>’.

<sup>130</sup> Kahn (1973), 352-4, who gives several examples from Herodotus.

<sup>131</sup> Our sections 8.2-8.5.

<sup>132</sup> See semantic Main Rule RMA (our section 1.71).

<sup>133</sup> Kahn (1973), 456.

At first glance the articular phrase τὸ ὄν, which, as we saw, consists of the definite article with the neuter present participle of the verb εἶναι, seems to show a complete parallel with the aforesaid article-plus-adjective expressions. It should be noticed, however, that this does not apply to participial phrases like τὸ βαδίζον or τὸ ὄν, which only mean ‘that which walks’ (or ‘is’) in the sense mentioned earlier sub (a), i.e. ‘the particular thing that walks’ (or ‘is’). Regarding the semantic value εἶναι (\*‘es-’), it is the function of the verbal noun οὐσία to cover the two abstract senses (b) and (c).<sup>134</sup>

To understand Aristotle’s philosophical position adequately we should be familiar with the intimate relationship existing between the senses (b) and (c). To Plato’s mind, there is a decisive ontological opposition between the two inasmuch as sense (b) refers to an immanent property (e.g. ‘heat’ or ‘being-hot’) which is nothing but something partaking in the correspondending transcendent Entity referred to by sense (c) (‘the Heat’). The transcendent Entity and the immanent property are related as Cause and effect, a relationship which is conveyed semantically in the synonymy of the two significates (the transcendent Form and the particular partaking in it): the particular is entitled to bear the same name as the corresponding Form.<sup>135</sup>

For Aristotle, however, who energetically rejects the doctrine of Platonic Forms, especially their transcendence, the distinction between the senses (b) and (c) has nothing to do with an ontological opposition. What it represents is merely two different approaches on our part to one and the same thing, which amount to either discerning a particular thing’s quiddity (essence) as inhering in it (taking sense (b)), or setting apart (for the sake of argument) that quiddity in order to contemplate it formally, in its own right (καθ’ αὐτό).

### 1. 62 *The various uses of οὐσία*

The word οὐσία (<\*ont-ia) is the verbal noun of ‘be’ (\*‘es-’). Unlike the article-plus-adjective phrase τὸ ὄν, which is exclusively used to stand for that which is (as τὰ ὄντα for the-things-that-are) taken *in concreto*, the word οὐσία,<sup>136</sup> despite its abstract touch, possesses the

<sup>134</sup> Cf. Kirwan (1971), 76; Hafemann (1998), 17-20.

<sup>135</sup> For Plato see de Rijk (1986), 55-62; 248-53; 316-26; for Aristotle, Kirwan (1971), 76.

<sup>136</sup> I confine myself to philosophical usage. A survey of the the pre-philosophic

twofold aspect mentioned above, and even has a tendency towards signifying the concrete thing taken as a self-contained whole (our ‘substance’), rather than that owing to which the thing *is* (‘essence’). However, as is well known, οὐσία is used by Aristotle to stand both for what in *Cat.* is called ‘primary substance’, e.g. an individual man or horse (*Cat.* 5, 2a11-13) and ‘secondary substance’, i.e. the essence or definable form that qua immanent dynamic force causes the primary substance to *be* (*ibid.*, 14-9).

The designation οὐσία basically stands for the notion of ‘being-ness’, which it shares with the root’s verbal forms (particularly ἔστιν and εἶναι). The word οὐσία shares its twofold use, intensional and extensional, with other common nouns in Greek. Thus it can intensionally stand for a thing’s ontic determinant, i.e. that which causes it to *be* something. This intensional use of the word οὐσία also includes its standing for the quiddity (‘being-ness’) of coincidental modes of being, such as paleness, educatedness, and the like.<sup>137</sup> It is *the* basic tenet of Aristotelian ontology that no ousia exists but in its capacity of particular indwelling form (εἶδος). This also applies to ‘beingness’ taken in its sense of universal container. Hence from the extensional point of view, οὐσία also refers to the substrate qua barely underlying any kind of specific beingness.

Taking its use from the extensional point of view, in its capacity of referring to a thing’s subsistent mode of being, οὐσία also connotes a substrate’s ‘this-ness’, i.e. what is commonly called a subsistent thing’s τόδε τι character or its singularity. At *Cat.* 5, 3b10-13 it is said that indisputably every primary ousia signifies a certain ‘this’; for the thing revealed is something individual and numerically one (while the secondary ousia rather conveys a certain qualification of the particular beingness inhering in the primary ousia). Ross rightly pinpoints the use of the indefinite pronoun τι in the phrase τόδε τι as our use of the indefinite article ‘a’; the τόδε then has deictic force.<sup>138</sup> The

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use of οὐσία in Greek is presented in H.H. Berger, *Ousia in de dialogen van Plato. Een terminologisch onderzoek* (diss. Nijmegen. Brill, Leiden, 1961), 9-24; cf. R. Marten, ΟΥΣΙΑ *im Denken Platons. Monographien zur philosophischen Forschung* XXIX. Meisenheim am Glan 1962, 8-12.

<sup>137</sup> My sections 4.48 and 1.62-1.63.

<sup>138</sup> Ross II, 248; Guthrie VI, 140, 4; 216. The definite pronoun τόδε alone occurs in the sense of ‘a this’ as well, so that τόδε and τόδε τι seem to be interchangeable; Bonitz, *Index* 495b33ff.; “τόδε omnino id significat, quod sensibus percipitur, τὸ αἴσθητον (... [*Met.* B 3, 997b35; cf. A 9. 990b8; M 4, 1079a4] ...)”; itaque Ar. per pronomen τόδε individuum distinguit a genere et notione universali”. E.g. *APo.* I 1, 71a20; *Met.* B 2, 997b30; τόδε as a synonym of καθ’ ἑκάστων, e.g. *Met.* Δ 2, 1014a21-

anti-Platonic purport of this position clearly comes to the fore where in *Cat.* 5, 3b12-17 'signifying this-ness' is explained as 'revealing something qua individual and numerically one'; and the oneness is explained in terms of lacking universal applicability.<sup>139</sup> As a matter of fact, Aristotle takes the property of this-ness so seriously that in *Met.* Z 1, 1042a25-28, ousia qua ὑποκείμενον is examined as one of the sincere candidates qualifying for being the 'true ousia'.<sup>140</sup> On the other hand, this position is counterbalanced elsewhere in *Met.* Z (e.g. 7, 1049a35), where this-ness is assigned to εἶδος as well, because qua particular form immanent in the ὑποκείμενον the latter provides the particular with singularity.<sup>141</sup>

The twofold sense is found throughout Aristotle's writings.<sup>142</sup> Especially at *Met.* VII 11, 1037a29ff., the twofold aspect connoted by οὐσία, i.e. both immanent form and concrete thing (σύνολος οὐσία) comes to the fore: "The ousia is the indwelling form, and the composite of form and matter is called οὐσία too". Thus οὐσία means either the concrete subsistent thing qua possessing some particular essence (e.g. 'horseness', when naming it 'horse', or 'whiteness', when naming it \*'the white' or this essence by itself). In order to use, as in Greek, a one-word expression that is as close as possible to Greek οὐσία, 'entity' might be suggested, which can stand both for 'self-contained thing' (as in 'corporal entities') and essence (as in 'the entity of justice is universality').<sup>143</sup>

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22; opposed to ἀπλῶς at *Met.* Θ 7, 1049a24; *Cael.* I 9, 278a12. Bonitz, *ibid.*, 495b44ff.: "et plerumque τὸδε τι ita usurpatur ut eundem fere ambitum notionis habeat et eandem varietatem atque οὐσία". Note that in speaking of the phrase's 'ambitus', Bonitz rightly talks of *extensional* sameness ('identity of reference'). Kirwan's (1971, 150) critique on Aristotle claiming (at *Met.* Δ 9, 1018a1-9) that sameness is a kind of oneness entirely ignores the important difference between extensional or material oneness and its intensional and formal counterpart.

<sup>139</sup> *My* section 4.45.

<sup>140</sup> Cf. *Met.* A 3, 1070a9-12; *An.* II 1, 412a6-11; *Phys.* I 7, 190b23-28.

<sup>141</sup> At *Met.* Z 13, 1039a14-23 the seeming paradox is elucidated by Aristotle's favourite approach of 'different focalization'. To Guthrie all this once again testifies to Aristotle's insouciant use of language: "A.'s indifference to the effect of his language never ceases to shock. Even τὸδε τι, his favourite expression for a physical unit or individual [...] can be applied in this comparative way to (of all things) ὅλη".

<sup>142</sup> E.g. in the *Lexicon*, *Met.* Δ 8, 1017b 13-15, and at *Met.* Z 13, 1038b15 οὐσία seems to stand for 'individual substance'; elsewhere in *Met.* it is frequently found in the sense 'immanent form', esp. in Z-H, e.g. Z 11, 1037a29; Guthrie VI, 204, n. 2.

<sup>143</sup> The latter sense (deriving from Medieval Latin 'entitas') is mainly found in older philosophical texts. The rendering 'reality' (Charlton, *Phys.* I and II, 56; see Guthrie VI, 142, n. 2) is out of the question, because of its connotation of 'actual existence'.

In the Lexicon, *Met.* Δ 8, Aristotle first sums up the various ways in which we commonly speak of οὐσία. They are four:

*Met.* Δ 8, 1017b10-22: We call (1) both simple bodies ousia,<sup>144</sup> as e.g. earth, fire, and water and everything of the kind, and bodies in general, as well as the things constituted out of them, animals and deities, and the portions of these. All these are called ousia, because they are not said of a substrate but the rest are said of them. (2) In another sense, that which, being present in such things as are not said of a substrate, is the cause of their being, as the soul is of an animal's being.<sup>145</sup> (3) Again, those constituent portions of such things which make them definite and mark them out as a 'this' (ὀρίζοντά τε καὶ τὸδε τι σημαίνοντα), and with whose elimination the whole thing is eliminated, e.g. the body with the plane's (as some assert), and the plane's with the line's. (In general it is thought by some that number is of this kind, on the grounds that when it is eliminated there is nothing left, and it makes everything definite).<sup>146</sup> (4) Again, what-it-is-to-be as expressed by the definiens (τὸ τὶ ἦν εἶναι οὐ ὁ λόγος ὀρισμός); and of each thing it holds that this is its ousia.

From this vulgar use he then draws the conclusion:

*Ibid.*, 1017 b23-26: It follows, then, that ousia is spoken of in two (main) senses, (1) the ultimate substratum (τό θ' ὑποκείμενον

<sup>144</sup> I follow Frede & Patzig in leaving this key term untranslated, because Aristotle's discussions throughout play on its focal ambivalent meaning, as for the most part indiscriminately standing for both our 'substance' and 'essence' or 'quiddity'.

<sup>145</sup> Compare Aristotle's definition of the soul (*An.* II 1, 412a19-b9: "So the soul must be the ousia in the sense of the form of a natural body which potentially has life", a19-21) as the actuality or ontic completeness (ἐντελέχεια) of a natural body that potentially has life" ('self-nutrition and growth'); cf. II 4, 415b8-27. I cannot see why Bos (2001, 197-9) claims that 'natural body' at 412a13 cannot be taken to stand for the animal's visible body and must indicate the corporeal medium that elsewhere (*Motu anim.* 10, 703a9-4) is called by Aristotle 'connate (or 'innate') spirit' (σύμφυτον or ἔμφυτον πνεῦμα). Bos assumes (194; 198) that in Aristotle 'living body'; has two distinct senses, viz. "the soul-body which is πνεῦμα or its analogue" and "the visible body which possesses soul through the presence and operation of both *soul* and πνεῦμα". In an earlier paper (in *Algemeen Nederlands Tijdschrift voor Wijsbegeerte* 91 (1991), 120) he is forced to distinguish two substances: the soul-body (πνεῦμα) and the visible body. Instead to Aristotle, an animal is *one* substance, and its πνεῦμα should be taken to be a distinctive feature of the animal εἶδος (indeed the most distinctive one), which as αἰσθητικόν and ὁρεκτικόν operates in animals, just as its analogues (γεννητικόν and θρεπτικόν) do in vegetative life. See for πνεῦμα in Aristotle Guthrie VI, 284, n. 5; 236, n. 2. On the other hand, Bos convincingly argues (2001, 190ff.) against the usual rendering 'a body equipped with organs' for σῶμα ὀργανικόν, instead of 'a body which serves as an instrument', viz. of the soul, which is the body's first entelechy (*An.* II 1, 412b4-6 *juncto* 412a27-28). Bos is also right in taking τῶν μερῶν at 412b18 to stand for the parts of the soul, rather than of the body.

<sup>146</sup> Cf. *Met.* Z 11, 1036b12, where some Platonists of Pythagorean bent are said to reduce the essence of a line to that of 'two-ness'.



ἔσχατον), which is no longer said of anything else (κατ' ἄλλου λέγεται),<sup>147</sup> and (2) that which, being a 'this', is at the same time discernible, and so is each thing's shape or form.

In this conclusion only two of the four senses mentioned remain. The third sense is left out, the second and fourth senses are combined, and the description of the first mentioned at b10-14 is modified. Thus οὐσία comes to mean (a) the ultimate substratum, and (b) the form (εἶδος) or essence or quiddity, which is precisely that which makes a thing 'what-it-is'. *Pace* Kirwan (148), (a) seems to be the ultimate underlying matter, of which Aristotle later claims (Z 3, 1029a27) that it is impossible that matter should be ousia, thereby suggesting that this sense of the term οὐσία must be dismissed for further examination. At Z 11, 1037a21ff. the notion of underlying matter has shifted to a thing's material parts, of which it is stated that they are not present in its quiddity as such (semantically, its 'formal significate'), but do feature in the essence of the compound of form *plus* matter ('material significate'). Thus the general thesis of Z is supported, which bears on the extensional 'sameness' of 'thing' and its enmattered form.

Aristotle's rejection of transcendence was bound to have a tremendous influence on his semantics. It is because there is no longer question of an ontological distance between the form and the thing informed by it, that the expression having sense (b) can easily be used to stand simultaneously for both the quiddity and the particular thing *qua informed by it* or, if you like, for the quiddity *qua enmattered* and the particular in which the form is invested.<sup>148</sup>

Thus οὐσία is frequently used by Aristotle to designate the particular thing in association with its quiddity. While for Plato the Forms as referred to by sense (c) (see section 1.61 above) are not only contemplated by human thinking 'in their own right' but also exist in their own right, in Aristotle's philosophy the phrase καθ'αυτό merely refers to a way of approaching things applied by the philosopher. It will not come as a surprise that this use is predominant in the central part of *Met.* where the author makes every effort to argue for his own view of true οὐσία, the enmattered form, that is, but *qua enmattered* and, consequently, taken together with its hypokeimenon.

<sup>147</sup> For the καθ' ἄλλου (sc. ὑποκειμένου) character see Bonitz, *Index*, p. 544a52-b10, and my (1980), 44-8.

<sup>148</sup> Semantic Main Rule RMA; my section 1.71.

1. 63 *A preliminary assessment of these uses*

Summing up our preliminary findings, one can establish the following scheme for Aristotle's uses of οὐσία:

(1) The basic notion conveyed by the verbal noun οὐσία is what we have labelled earlier 'hyparxis' and so concerns 'there being something present in one way or another'. Its counterpart, the finite verb ἔστιν, differs from the verbal noun in that the hyparxis not only concerns an individual 'being there' but also events or states of affairs 'being the case'.

(2) This basic notion is often used by Aristotle to refer to the general feature of 'being there' or 'occurring somewhere'. This use is aptly described by Simplicius as bearing on the 'stretch of time something is there' (τὴν παράτασιν τῆς ὑπάρξεως).<sup>149</sup> In Aristotle, *Phys.* IV 12, 221b30-31 οὐσία and εἶναι are juxtaposed and both refer to a thing's 'being there'.<sup>150</sup> In common Greek it is more frequently found in its compound forms παρούσια ('presence') and ἀπουσία ('absence').<sup>151</sup>

(3) The aforesaid general sense can be specified in a twofold way, intensionally or extensionally. When taken in its primary, intensional or abstractive sense, it refers to that which causes a thing to be present (or to be given as such and such), i.e. 'being-ness'.<sup>152</sup> In point

<sup>149</sup> Speaking (CAG IX, p. 735<sup>20ff.</sup>) in the wake of Alexander of Aphrodisias about the 'being of motion' (τὸ εἶναι τῆς κινήσεως), which in the context of Time coincides with motion being measured, Simplicius points out (735<sup>31-34</sup>) the difference between existential ('hyparctic') 'be' and the kind of ('connotative' or 'intensional') 'be' signifying a thing's εἶδος; connotative 'be' is then described as the kind of being which signifies a thing's temporal (and spatial?) occurrence, and, so to speak, its ontic actuality (ἐνέργεια): For the text see my sections 1.53 and 1.64.

<sup>150</sup> "There is some time, a greater one, which will exceed both the time of their [i.e. of the destructible and generable things] being in existence (τοῦ τε εἶναι αὐτῶν) and the time which measures their being (τὴν οὐσίαν)". Other places in Bonitz, *Index* p. 544a29-38.

<sup>151</sup> Cf. Ruijgh (1979), 59f.

<sup>152</sup> Kahn (1973, 458) refers to the fifth-century Sophistic treatise *De arte* (preserved in the Hippocratic Corpus, and edited in the Loeb edition of Hippocrates II, 192), where an analogous use of οὐσία to stand for 'being-ness' is found. In *De arte*, cap. 2 it reads "It is unreasonable indeed to believe that any of the things-that-are (τὰ ἑόντων τι) is not (μὴ ἑόν). For with respect to the things-that-are-not, who can behold any being-ness (οὐσίην) as to declare that they *are*?" In the fifth chapter of the same treatise (*ibid.* II, 196) the anonymous author discusses the value of his art, saying "And this is an important proof for the οὐσίῃ of the art that it is 'be-ing' (ἐοῦσα) and great". Unlike Kahn, who explains both passages in terms of real existence, I think the author rather takes our key term intensionally and refers to the intrinsic feature of being-ness ('body', so to speak), which is found in things-that-are (and missing in things-that-are-not), and makes his art 'substantial', not inane or idle. Likewise in the next chapter, οὐσίῃ is opposed to that which has only

of fact, when taken in this sense, οὐσία occurs as the appropriate nominalization of the finite verb as used in the philosophic τί ἐστίν question,<sup>153</sup> and so is to be taken as a one-word expression synonymous with the phrases τὸ τί ἐστίν and τὸ τί ἦν εἶναι. Small wonder that οὐσία is often equated with or juxtaposed to τὸ εἶδος, τὸ τί ἦν εἶναι or ἡ φύσις,<sup>154</sup> and used in the cognate logical sense of λόγος τῆς οὐσίας ('definiens').<sup>155</sup>

When taken extensionally or *in concreto*, οὐσία is [4a] sometimes collectively used to stand for all concrete things together that possess beingness, i.e. the whole universe of concrete things that constitute nature. So in *Phys.* I, 6 189a15ff. the term οὐσία is used to stand for, in the words of Simplicius (CAG IX, p. 198<sup>28</sup>), τὰ φυσικὰ πάντα πράγματα. For the most part, however, (4b) it refers to the kind of entity that possesses 'being-ness' pre-eminently, to wit 'substance', or the individual, subsistent thing which can serve as the substrate of accidental entities; and these things are the only inhabitants of the outside world, and indeed the only things that exist.<sup>156</sup> It is this privileged sense of οὐσία that is in the focus of Aristotle's interest in the central Books of the *Metaphysics*.

#### 1. 64 *The 'connotative' or 'intensional' use of 'be'*

In the previous sections we have discussed the focal meaning of the Greek notion 'ES-' or 'be' ('being there') as coming to the fore in its several grammatical appearances: the infinitive εἶναι, the articular participle τὸ ὄν, and the verbal noun, οὐσία. These words are not only used to refer to what is actually there ('exists') or actually is the

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a name without any content. For that matter, the well-known Philolaos fragment 6 too makes reference to the eternal feature of 'being-ness', admitting only divine, not human knowledge; for the text see my note 189 below.

<sup>153</sup> As in Medieval Latin 'quidditas' ('quiddity') with respect to the 'quid est?' question. See Ross I, 127, and Kahn (1973), 461 and my *Index* s.v. Ross (I, 127) presents a clear assessment of the different senses of οὐσία: "Though οὐσία is properly a non-committal word, meaning the most real element in a thing, wherever that is to be found — in the essence of the thing, the universal or class under which it falls, or its material substratum (Z. 1028<sup>b</sup>33) — yet Aristotle tends constantly to use it in the sense of that which he himself believes (Z. 1041<sup>b</sup>7-9) to be the most real element in a thing, viz. its form or essence". See also the semantic Main Rules (our sections 1.71-1.72).

<sup>154</sup> Bonitz, *Index*, p. 544a52-b10, and 544b11-33.

<sup>155</sup> Bonitz, *Index*, p. 545b1-5.

<sup>156</sup> For this use see Bonitz, *Index*, p. 544a39ff. (under the heading 'id quod re vera est'); semantic Main Rules (sections 1.71-1.72).

case,<sup>157</sup> but may also represent a form of ‘be’ (\*‘es-’) that does not as such include actual existence, and indeed does not go beyond the designation of a general ontic condition underlying, and connoted by, any categorial implementation.<sup>158</sup> On this account, each and every noun includes connotative ‘be’, so that e.g. ‘man’ equals ‘being-a-man’, and ‘pale(ness)’ or ‘health’ amounts to ‘someone’s being pale or healthy’; in a similar vein, e.g. ἐπιστήμη should be understood as ‘someone’s knowing something’.

In Aristotle’s protocol language, this connotative ‘be’ can be expressed by the infinitive εἶναι, the periphrastic finite verb ἐστί (in present, past, or future tense), and the present participle ὢν.

(A) The connotative *infinitival* εἶναι is found in well-known phrases such as τὸ ἀνθρώπῳ εἶναι, τὸ λευκῷ εἶναι, and the like, which are used to signify the very quiddity of being-a-man, being-pale.<sup>159</sup> In such cases εἶναι refers to the general and as yet unimplemented (empty indeed to Aristotle) ontic condition that can be implemented by any categorial mode. Grammatically speaking, the dative case should be taken as a possessivus, but sometimes (e.g. at *An.* II 2,

<sup>157</sup> The grammatical distinction between ‘existing’ (or ‘actually being there’) and ‘being the case’ is required by English idiom, which unlike Greek and Latin, does not allow one to say e.g. ‘Socrates *is*’ or ‘That Socrates is pale *is*’. Kahn (1973, 457) rightly speaks of “the persistent Greek refusal to make any sharp distinction between states of affairs or facts with a propositional structure, on the one hand, and individual objects or entities on the other. For the Greeks, both types count as ‘beings’.” By the way, Kahn’s use of ‘refusal’ is somewhat odd.

<sup>158</sup> The Ancient Commentators were familiar with what I have christened ‘connotative be’. For instance, Alexander of Aphrodisias says (CAG I, p. 371<sup>18-23</sup> to *Met.* Δ 7, 1017a7): φησὶ δὲ τοσαυταχῶς τὸ καθ’ αὐτὸ ὃν λέγεσθαι ὅσα σχήματα καὶ γένη κατηγοριῶν. [...] δεκαχῶς οὖν φησὶ τὸ καθ’ αὐτὸ ὃν λέγεσθαι. καὶ αἴτιον τούτου ἀποδίδωσιν· ἐπεὶ γὰρ ἐκάστῳ τῶν ὄντων τὸ εἶναι συντασσόμενον ταῦτόν ᾧ συντάσσεται σημαίνει· τὴν γὰρ οἰκείαν ὑπαρξιν ἐκάστου σημαίνει τὸ ὃν ὁμώνυμον, where the use of the prefix συν- should be noted.

<sup>159</sup> Bonitz, *Index*, p. 221a34-40. Notably, the phrase is found 12 times in *Phys.* (I 2, 185b22 and 25; 3, 186a29; 7, 190a17 and 191a1; III 1, 201a32; 3, 202b16; 5, 204a23; IV 6, 213a19; 11, 219a21 and b11; V 5, 229a18); see also Bassenge (1960), 16. The alternative formulas ὅπερ ἀνθρώπῳ εἶναι and ὅπερ ζῷ εἶναι are found at *Met.* Γ 4, 1007a22-29; *Phys.* I 3, 186a33-187a11. Note that the phrase is both used for the (logical) universal quiddity and the individual one as immanent in a particular. It is even found as Σωκράτει εἶναι (*Met.* Z 6, 1032a8 and τὸ τῆδε τῇ οἰκίᾳ εἶναι (*Met.* Z 15, 1039b25; cf. Z 10, 1035b16; *An.* II 1, 412b11); cf. τὸ τί ἦν εἶναι Καλλίᾳ (*Met.* Δ 18, 1022a27) to be put alongside occurrences such as at *Top.* VII 3, 153a16. Note also the possessive dative at *Met.* Z 3, 1029a22. Bassenge’s worries (17f.) about the (putatively different) status (individual vs. universal) of what is signified by the τὸ [x] εἶναι and τὸ τί ἦν εἶναι phrases are due to his ignoring that to Aristotle, any form is an individual one immanent in a particular, but can be taken as universally applying to other entities as well.

414a5-15) it also seems to involve a causative nuance of some sort.<sup>160</sup> Philosophically, phrases such as τὸ ἀνθρώπῳ εἶναι serve for opposing a thing's mode of being to the thing taken as an individual possessing this mode. Thus at *An.* III 4, 429b10ff. Aristotle distinguishes between a thing and its quiddity, e.g. between an extended thing and extension, or between a specimen of water (or flesh) and the quiddity of water (flesh), i.e. the property of being water (flesh) enmattered in such specimina:

*An.* III 4, 429b10-13: Since the particular extended thing (τὸ μέγεθος) is not the same as the quiddity extension (τὸ μεγέθει εἶναι) ('being extended'), nor water (ὕδωρ) the same as its quiddity (ὕδατι εἶναι), and so in many other cases — though not in all; for in certain cases the thing and its quiddity coincide<sup>161</sup> —, one discriminates being flesh (τὸ σαρκὶ εἶναι) and the specimen of flesh (σάρκα) either by different faculties, or by the same faculty in two different states.

The dative construal indicates the same as the thing's definiens, and so at *Phys.* I 2, 185b32-34 the quiddities 'being pale' and 'being educated' (as belonging to one thing, say, Socrates) are said to differ formally (λόγῳ).<sup>162</sup>

As for the article-plus-infinitive construction, it is tempting to assume that the articular infinitive in phrases like τὸ ἀνθρώπῳ εἶναι functions as the abstractum οὐσία, just as τὸ βλάπτειν ('to disable', 'to hinder') equals the nomen actionis βλάβη ('damage'). Thus the articular infinitive serves as what was later on called ὄνομα ῥήματος in the sense of 'word expressing the "res verbi" in its generic form, apart from actual subjects and various moods'.<sup>163</sup>

When Simplicius comments on the discussion of Time in *Phys.* IV, arguing for the extensional coincidence of 'Time measuring motion' and 'motion measured by Time', he tries to explain this by pointing out that in this context the being of motion (τὸ εἶναι τῆς κινήσεως) differs from the type of being customarily meant by the Peripatetics, namely the 'be' that signifies a form. That the latter type of 'be' is

<sup>160</sup> One should realize that any such grammatical distinctions are arbitrarily imposed on the *langue parlée*. As for the dative, Professor Ruijgh quite convincingly suggests to associate its use in τὸ ἀνθρώπῳ εἶναι with the phrase ἔστι μοι ('I have'); cf. the focal sense of οὐσία (in pre-philosophical usage): 'that which is one's own'.

<sup>161</sup> An allusion to the case of primary things named in virtue of themselves (*Met.* Z 6, 1032a4-10; our section 9.42)

<sup>162</sup> Cf. *Phys.* IV 3, 210b16-17; *De somniis* I, 459a16-17.

<sup>163</sup> C.J. Ruijgh, "Sur l'emploi complétif de l'infinitif grec" in B. Jacquinod (ed.), *Les complétives en grec ancien*. (Publications de l'Université de Saint-Etienne, 1999), 215-31, at 219.

what we have dubbed ‘connotative’ clearly appears from the context: (1) the type of ‘be’ which is under examination in the discussions about Time is said to disclose an object’s ‘temporal continuance’ (παράτασις τῆς ὑπάρξεως)<sup>164</sup> and, as it were, its ‘actualized ontic power’ (the terms ἐνέργεια and ἐντελέχεια are used); (2) its counterpart, which is nothing to do with an object’s actuality, bears on an object’s form, its ‘what-it-is’ *in abstracto*. Simplicius’s exposition is the more interesting as he seems to follow Alexander of Aphrodisias.<sup>165</sup>

It is tempting to describe this state of affairs in terms of intension and extension. The being of motion is called ἐνέργεια παρατεταμένη, which can be rendered ‘extended ontic power’ or ‘actual continuance <in time>’. Clearly the substantive παράτασις (which is of the same root as the verb παρατείνειν = ‘to stretch out along ...’) connotes the feature that what is signified by a form (εἶδος) is satisfied by something in a stretch of time, and thus, despite its metaphysical flavour, comes close to our label ‘extension’, which in its concrete sense means the class of entities to which a given expression correctly applies.

On this line of thought, it would seem reasonable to characterize the opposed type of (connotative) ‘be’, which was said by the Peripatetics to signify the form or ‘intension’,<sup>166</sup> alternatively as ‘intensional be’, whereas hyparctic ‘be’ can be named ‘extensional be’. Thus intensional or connotative ‘be’ concerns the type of being-ness which is *eo ipso* given together with any significative concept. To Aristotle, it is implied by any positing of a concept,<sup>167</sup> in a similar way as propositional attitudes, such as expressed by ‘to think’, ‘to believe’, ‘to promise’ etc., imply intensional objects.

<sup>164</sup> Note that the grammarians use παράτασις to stand for ‘time of the imperfect tense’; Apollonius Dyscolus, *De syntaxi* 70, 27 ed. Becker, given in Uhlig’s margin.

<sup>165</sup> CAG IX, p. 735<sup>26-36</sup>: καὶ ἰδοὺ νῦν ὡς οἶμαι ὁ Ἀριστοτέλης σαφῶς παραδέδωκε πῶς μέτρον κινήσεως ὁ χρόνος, ὅτι κατὰ τὴν τοῦ εἶναι παράτασιν αὐτῆς καθ’ ἣν μάλιστα καὶ ὑφέστηκεν [‘in virtue of which above all it subsists’]. “ἐπὶ γὰρ τῆς κινήσεως, ὡς φησιν Ἀλέξανδρος, ταῦτόν τὸ εἶναι καὶ τὸ κινήσει εἶναι ὥσπερ καὶ ἐπὶ τῶν ἄλλων τῶν ἐν τῷ γίνεσθαι τὸ εἶναι ἔχόντων, καὶ διὰ τοῦτο ταυτόν ἐστι τὸ μετρεῖν τὴν κίνησιν καὶ τὸ εἶναι τῆς κινήσεως”. δῆλον δὲ ὅτι ἄλλο τοῦτο ἐστι τὸ εἶναι παρ’ ἐκείνο τὸ συνήθως ὑπὸ τοῦ Περιπάτου λεγόμενον καὶ τὸ εἶδος σημαίνει· τοῦτο γὰρ τὴν παράτασιν τῆς ὑπάρξεως καὶ οἷον τὴν ἐνέργειαν τοῦ ὄντος δηλοῖ. ἐπεὶ οὖν ἡ τῆς κινήσεως οὐσία ἐνέργειά ἐστι παρατεταμένη (ἐντελέχεια γὰρ ἦν τοῦ κινήτου), εἰκότως ταυτόν ἐστι κίνησις καὶ τὸ εἶναι τῆς κινήσεως. For the doctrinal context see my sections 12.32-12.33 in Vol. II.

<sup>166</sup> ‘Intension’ being ‘the set of characteristics or properties by which the referent(s) of a given expression is (are) determined’.

<sup>167</sup> *Mel.* Γ 2, 1003b26-32, and Z 1, 1028a35-36, discussed below.

(B) The *finite verb* ἐστίν occurs in its connotative or intensional sense whenever it is used periphrastically, such as in Aristotle's equation of βαδίζει and βαδίζων ἐστίν.<sup>168</sup> In such cases the ἐστίν has a container function similar to that which εἶναι has in the formulas τὸ ἀνθρώπῳ εἶναι, τὸ λευκῷ εἶναι, the only relevant difference being that the former is concerned with verbs (in fact, adjectival verbs),<sup>169</sup> whereas the latter applies to (substantive or adjective) nouns.

It should be borne in mind that whenever a finite verb like βαδίζει is used with assertoric force (meaning 'it is the case that [x] walks'), this force is transferred to the connotative ἐστίν in βαδίζων ἐστίν. Kahn aptly suggests (1973, 127) that the periphrastic construction should be defined in purely syntactical terms without reference to the meaning of the verb. Hence the semantic question of whether the verb ἐστίν is used assertorically or non-assertorically is not at issue. As far as Aristotle's protocol language is concerned, the connotative 'be' is given the force of an assertoric operator, and put emphatically at the head of the sentence (as a result of which it is used as an orthotone): ἔστιν ἄνθρωπος βαδίζων ('Is: [(man&walking) be-ing]').<sup>170</sup>

(C) The connotative or intensional use of the *participle* ὄν, finally, is found in the phrase ὄν ἄνθρωπος, which is used by Aristotle in *Met.* when he discusses the (so called 'transcendent') terms 'being' and 'one'. It is claimed that despite their formal differences, these notions are semantically convertible to the extent that when they are added to a common noun like 'man', the elements 'one' and 'being' do not act as a significative sememe supervening the meaning of the common noun:

*Met.* Γ 2, 1003b26-32: Indeed 'one man' (εἷς ἄνθρωπος) and 'man', as well as 'being-a-man' (ὄν ἄνθρωπος) and 'man' are the same thing; and the doubling of these words in 'one-man' 'man-being-one' does not bring about any difference; and clearly, in the case of coming-to-be or ceasing-to-be, 'thing' and 'be-ing' go together, as also holds of 'thing' and 'one'. Hence it is obvious that the addition in these cases does not alter the <noun's> meaning.<sup>171</sup>

<sup>168</sup> E.g. at *Int.* 12, 21b9-10; *APr.* I 46, 51b13-16; *Met.* Δ 7, 1017a27-30. Note that this periphrastic construction is not unusual in Greek; see Liddell & Scott s.v. εἰμί B 2; Kahn (1973), 126-48. Quite remarkably, Aerts, who presents an extensive discussion (1965, 5-26) of the periphrases with εἶναι *plus* present participle in ancient Greek, does not take Aristotle's 'philosophic' paraphrase into consideration. (Cf. his *Introd.*, p. 3).

<sup>169</sup> The label 'adjectival verb' applies to any verb other than the substantive verb.

<sup>170</sup> For this notation see my sections 2.13 and 3.75.

<sup>171</sup> Cf. Aristotle's remarks on 'being one' at *Met.* Z 16, 1040b16-24, H 6,

It goes without saying that *pace* Ross and Kirwan (*ad loc.*) this connotative (intensional) being is nothing to do with 'existence'. It just represents the ontic element underlying, and included in, any categorial mode of being expressed by a name or name-like phrase. When he says that nothing is added if we use combined expressions and e.g. call up [x] not just as 'a man', but 'something-being-a-man', what Aristotle means is that the combined expression does not contain any extra information.<sup>172</sup>

Overviewing the several occurrences of connotative (intensional) 'be' the following points can be made:

(1) There are many passages in Aristotle in which substantive or adjectival nouns should be taken to mean 'man-being', 'pale-being', and so on, rather than just 'man', 'animal', 'pale' or 'educated'. In other words, in such cases the nouns are not used in a purely denotative sense, but also connote the 'being so-and-so' of the things signified.<sup>173</sup>

(2) The semantic view that every nominal or verbal sememe by connotation contains the basic notion of 'being' is at the basis of Aristotle's argument against Plato. To Plato, transcendent Being (Εἶναι) is the Fullness of Forms (later called 'plenitudo formarum'); the particular forms existing in the outside world are merely as many shares of such-and-such being in virtue of which the outside things

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1045a36-b7, and I 2, 1053b9 *juncto* M 8, 1083a20-1085a2. For the broader context see my sections 7.32 and 10.6. Berti rightly underlines (1979, 96-117) Aristotle's rejection of the Platonic 'Being by Itself' and 'One by Itself' but none the less takes the Aristotelian 'be' and 'one' in terms of 'transcendent first principles' (117) which account for the particulars' being and being one. We should not confound, however, the logical property of universal applicability with ontic particularness; my sections 9.62-9.63; 10.71.

<sup>172</sup> At *SE* 7, 169a24 Aristotle recognizes that it is not easy to isolate the notions 'one' and 'be-ing'. It will be claimed in my section 3.37 (*ad fin.*) that at *Int.* 3, 16b23-25 it is connotative ὅν that is under discussion. Celluprica rightly rejects (1987, 170f.) any association of connotative 'be' with copulative 'be': indeed, it does not 'couple' two other terms, but is itself included in (intrinsically 'coupled with') any other categorematic notion. Interestingly enough, while still retaining (*ibid.*, *passim*) the idea of a copula in Aristotle, she is of the opinion (172f; cf. 178) that to Aristotle, any statement is an attribution of two names to one thing, and she refers to *Int.* 7, 17b7-10. For the rest, she correctly associates (176) connotative 'be' with connotative 'oneness'. — From the grammatical point of view, this connotative use of ὅν (and εἶν) is parathetic. See Ruijgh (1979), 66, who describes (*ibid.*; cf. 1971, 116) parathetical elements as elements that are not indispensable for an expression's semantic and syntactical integrity. See also Kühner-Gerth II, 101-3 ("Weglassung des Partizips ὅν wie in καίπερ σκοτεινός").

<sup>173</sup> From the 13th. century onwards metaphysical questions such as 'Utrum 'homo' ('Sortes') sit 'hominem' ('Sortem') esse' are discussed.



participate in the transcendent Source of Being-ness.<sup>174</sup> In Aristotle, things are quite different. To him, there is no beingness other than what is found in the outside world. It is the form immanent in the hypokeimenon that endows it with a particular mode of being: 'forma dat esse', as later commentators will put it, on the basis of what is claimed about the soul as form in *De anima*.<sup>175</sup> By itself, εἶναι is a (categorially) empty notion which either serves for signifying an unqualified 'being there', 'being the case', 'being given' ('strong hyparxis'), or just refers to the ontic value connoted by any significative term ('weak hyparxis'): to Aristotle, every form is an enmattered mode of 'being'.

(3) Sometimes the nominal form of 'be' (οὐσία) too is used to refer to connotative being as included in every significative expression, whether a single name or a compound formula (such as a definiens). For the latter case see e.g. *Met.* Z 1, 1028a35-36: "For anything it holds that in its account that of its be-ing is included (ἀνάγκη γὰρ ἐν τῷ ἐκάστου λόγῳ τὸν λόγον τῆς οὐσίας ἐνυπάρχειν).<sup>176</sup> It goes without saying that in this passage οὐσία cannot stand for factual being.

(4) In the final analysis the notions 'actual-potential be-ing' too must be seen as featuring in the context of connotative being. One should realize that metaphysical 'actuality' (as dealt with in *Met.* Θ, chs. 1-9) differs from 'facticity' or 'being-the-case'.<sup>177</sup> Moreover, there can be no doubt whatsoever that metaphysical 'potentiality' is nothing but a modification of connotative (intensional) being.

(4) In Late Antiquity as well as in the Middle Ages the intimate coalescence (called 'compositio') existing between the form and connotative or intensional being is usually understood in terms of its (Platonic) counterpart 'participation' (μετοχή): any form is qua mode of being-ness an ontic value.<sup>178</sup> In Aristotle's ontology (which

<sup>174</sup> In the final analysis — as is actually demonstrated by the development of Neoplatonism —, Plato's transcendent Domain of the Forms should be taken as the comprehensive Domain of Perfect Being, not as split up into a (finite!) number of distinct Forms. Distinct forms do not come in until the unique Source of Being is differentiated by participation, each share (i.e. each particular immanent form) representing just a limited portion of being-ness; De Rijk (1986), 353, n. 55.

<sup>175</sup> *An.* II 4, 415b8-28. Cornelio Fabro, *Participation et causalité selon S. Thomas d'Aquin* (Louvain-Paris 1961), 344-62.

<sup>176</sup> Ross somewhat unfortunately paraphrases (II, 161) this sense of οὐσία as 'quasi-substance'.

<sup>177</sup> De Rijk (1981), 38-40.

<sup>178</sup> See e.g. Klaus Kremer, *Die neuplatonische Seinsphilosophie und ihre Wirkung auf Thomas von Aquin*. Studien zur Problemgeschichte der antiken und mittelalterlichen Philosophie I. Brill Leiden 1971, 424-38; 455-7; A. Zimmermann (1971),

unlike Plato's metaphysics of Being, is a metaphysics of forms), it is the form that imparts be-ing ("forma dat esse") and, therefore, from the viewpoint of semantics, connotes it.<sup>179</sup>

An important corollary from our foregoing discussions (sections 1.4-1.6) is that contrary to the gamut of senses of 'be' usually listed as requiring serious differentiation ('existential', 'copulative', 'identative', 'definitorial', 'class-inclusive', 'constitutive', 'veridical', and the like, *ad libitum*), Aristotle — in spite of his distinction of the *uses* of 'be' (as in *Met.* Δ 7) only knows of a single semantic bifurcation: 'intensional' (or 'connotative') and 'extensional' (or 'hyparctic'). As will appear more than once, for his modest semantics, this division meets any requirement.

### 1. 7 *Some basic semantic rules. Ambivalence vs. ambiguity*

In Aristotle's semantic practice certain customary features can be observed which have a strong impact upon his management of the phenomenon of 'meaning'. These features can be listed as semantic rules. These rules are all concerned with the multiple use of certain expressions.<sup>180</sup> The first one is about nouns (names)<sup>181</sup> or noun-like (name-like) expressions alone, the other three apply to any expression, whether simple designations or composite ones, i.e. dictums or *that*-clauses as they occur in the surface structure.

#### 1. 71 *Four Main Rules of Aristotelian semantics*

The *first* Main Rule of Aristotelian semantics, as I take it,<sup>182</sup> can be formulated as follows: names (nouns) are used (a) to denote things

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293f.

<sup>179</sup> No doubt, to talk of a thing's '*having* (connotative) be-ing' and of a 'compositio' of form and be-ing is just a manner of speaking. I think we should explain the notion of 'having' in this case not in terms of plain possession but of Aristotelian ἔχειν and ἔξις, which most pregnantly bear on certain modes of 'be-ing', not 'having'. (my section 4.9). — The twin notion of 'connotative one' will be further discussed in my sections 9.35 and 10.6.

<sup>180</sup> In what follows (esp. our section 1.72) it will be clear why I prefer to speak of 'ambivalent use of expressions' rather than 'use of ambivalent expressions'.

<sup>181</sup> Throughout the present work the term 'name' is used in its broad sense of 'any noun-expression or nominal expression representing an incomposite semantic value' (e.g. 'man', 'health', 'healthy', 'walking').

<sup>182</sup> It should be noted at the outset that these rules are meant as rules of thumb and are nothing to do with formal semantics. See also my *Preface*.

as self-contained, subsistent wholes, and (b) by the same token connote the special property (feature) signified by it qua possessed by these things, and also (c) refer to this property in an abstract manner, conceiving it apart from things in which it is enmattered.<sup>183</sup> This rule, which in fact concerns a term's multiple applicability (for ease of reference: RMA), has a wide range of implementation:

(1) *concerning the use of substantives* :

Taking first the general notion of ousia, the word οὐσία can stand for (α) any subsistent thing (i.e. the physical particulars which in *Cat.* are indicated by πρώτη οὐσία), but also (β) (in the sense of δευτέρα οὐσία or εἶδος) for the characteristic property in virtue of which a thing possesses subsistence.<sup>184</sup> In addition, the word can also be used by philosophers<sup>185</sup> (γ) to stand for 'being-ness' in general, including that kind of being-ness invested in non-substantial ('non-subsistent') modes of being. For instance:

Re (α): the use of οὐσία in *Cat.* 5, 2a11; *APr.* I 27, 43a25-29; *APo.* I 1, 71a23-24; 22, 83a30; *Phys.* I 2, 185a32; 7, 190a36; III 5, 204a23; *Met.* Δ 8, 1017b13; Z 3, 1029a8; K 10, 1066b13. — As for other substantives, a similar usage is found throughout in common Greek, whenever nouns such as ἀνὴρ, γυνή, πατήρ, μήτηρ, δένδρον, λίθος, are used to denote particular men, women, and so on. In Aristotle we find this usage e.g. in the biological works whenever any kind of animal is involved.<sup>186</sup>

<sup>183</sup> Guthrie VI, 204; 212, n.1; 214, n. 2. Cf. in ordinary Greek the use of ἀδικία ('injustice') for ἀδίκημα ('wrongful act'). For Socrates and Plato see De Rijk (1986), 30-5; 41-5; 107-9; 140-4; 180-3; 265-71; 327-47. The semantic properties featuring in this rule were refined in Medieval semantics, e.g. in the lore of semantic stratification of appellative names; de Rijk (1981), 41-52. It should be borne in mind that Aristotle does sometimes oppose these two senses, e.g. *Cat.* 10, 12a35-b16; our section 4.84. Cf. Porphyry CAG IV-1, p. 124<sup>+10</sup>.

<sup>184</sup> The absence of a sharp borderline between abstract and concrete also comes about in the concrete use of abstract nouns in common Greek, such as γένος for 'offspring', γένεσις for 'ancestor'; Kühner-Gerth II 1, 10-13; Kahn (1973), 288-92, who also criticizes (460-2) the Ancients' use of οὐσία in this respect; see our next note. Cf. our use of words like 'Her Majesty', 'His Excellency'; my section 1.73. Professor Ruijgh was kind enough to draw my attention to metonymical expressions in Homer, such as ἱερὸν μένος Ἀντινόοιο (*Od.* 18, 34) said of Antinoos himself.

<sup>185</sup> Kahn has (1973, 460-2) some linguistic observations which shed some light on the philosophical use of οὐσία from Plato onwards.

<sup>186</sup> Cf. Bonitz, *Index*, p. 545a27-32 ('substantia materialis'), and most significantly in cases where οὐσία *plus* genitive is used just for designating a thing in its substantiality (Bonitz, 546a2-4). Likewise Abelard uses 'essentia Socratis' to designate the person Socrates, not to refer to his 'manhood'; de Rijk (1981), 19-24. — Graeser has (1977, 372) misgivings about this phenomenon in Ancient parlance;

Re (β): E.g. at *Met.* Z 11, 1037a29 οὐσία is said of the immanent form (τὸ εἶδος τὸ ἐνόν); in this sense it occurs throughout *Met.* Z (e.g. 4, 1030a3: “the quiddity (τὸ τί ἦν εἶναι, one of the definientia of οὐσία; see 1029b11-12) is precisely what a thing is”; 6, 1031a18; 7, 1032b14); 11, 1037a29; 17, 1041b7-19; H 3, 1044a9-11 (cf. Δ 4, 1014b36 and 1015a5); also elsewhere, e.g. *PA* I 4, 644a23-24. — As for other substantives, they may also be used to refer precisely to a thing’s characteristic mode of being owing to which it is what it is; e.g. in phrases such as τὸ ἀνθρώπῳ εἶναι, τὸ κύκλῳ εἶναι.<sup>187</sup> Heinaman has listed (1980, 75f.) a number of cases where a thing’s form (εἶδος) alone is referred to by the appellative noun.<sup>188</sup>

Re (γ): The term οὐσία is indiscriminately used to refer to the ‘being-ness’ connoted by both substantial (‘subsistent’) and non-substantial terms; see particularly *Top.* I 9, where the phrase τί ἐστὶ is used for both subsistent and non-subsistent things.<sup>189</sup> An interesting case is found in one of Aristotle’s expositions of the meaning of the phrase ‘to be attributed coincidentally’ (κατηγορεῖσθαι κατὰ συμβεβηκός), e.g. at *Long.* 465b6-7 (“because the essence <of accidental properties> cannot be predicated of any substrate”).<sup>190</sup>

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see e.g. his criticisms of the use of τὸ ὄν at *Met.* Z 1, 1028a10-15; cf. *ibid.*, 376f.

<sup>187</sup> For this connotative being see our section 1.64.

<sup>188</sup> *Met.* Z 7, 1032a18 and 23; 8, 1033a27-33 and b9; 9, 1033b11; 10, 1035a9-11 and 14-16; 1036a1 and 17-18; 11, 1037a7-8; *Cael.* I 9, 278a13-15; *Gen.* I 5, 321b22-23 and 33. For the entire collection falling under our (β) see Bonitz, *Index*, 545a32-546a4. Bonitz’s remark (544a49-51) that to follow out Aristotle’s uses of the word οὐσία would amount to expounding his whole philosophy seems, however true in itself, to disregard the fact that after all such an overall exposition can be presented with all due clarity if you take the focal meaning of εἶναι and its cognates as your starting-point.

<sup>189</sup> Our section 5.23. Likewise, the appellation ὄν can be secondarily used for non-substantial modes of being. See *Met.* Z 1, 1028a10-20. — A nice example of this use of ‘be’ is also found in what the late fifth-century anonymous author of *De arte* (‘On the Art of Medicine’) claims (ch. 2) about medicine as a true τέχνη; for the text see my note 152 above. Also Philolaos, fr. 6 — following the text edited in W. Burkert, *Weisheit und Wissenschaft* (Nürnberg 1962), 233 —: “The being-ness of things (ἀ μὲν ἐστὼ τῶν πραγμάτων), which is eternal, and their very nature admit divine, not human knowledge, beyond the fact that none of the things-that-are, and which are known by us could have come to be if there did not exist as a basis (ὑπαρχούσας) the being-ness (τὰς ἐστούς) of those things from which the world-order is composed (συνέστα)”.

<sup>190</sup> Meaning: you cannot say ‘Socrates is sickness’, but must say ‘Socrates is sick’ (‘a sick entity’), because any property (‘sickness’) only occurs enmattered (a sick person). It is one of the consequences of Aristotle’s basic philosophical tenet (against Plato) that no form, whether substantial or accidental, can exist unless enmattered. A famous sample of the polyvalence of οὐσία is found at *An.* II 1, 412a4-9, where the soul’s nature is under examination: ‘ousia as matter’, ‘ousia as

(2) *concerning the use of substantivated adjectives and articular participles*: As is also common in Plato and in non-philosophical Greek as well,<sup>191</sup> Aristotle uses substantivated adjectives, such as τὸ λευκόν, τὸ μουσικόν, not only to stand for ‘the white (educated) object’,<sup>192</sup> but also to the property, ‘whiteness’ (‘education’ or ‘educatedness’), or the object in its capacity of having the property (Cf. the fourth Rule, RSC). Kirwan (1971, 76) seems to be right that articular participles, such as τὸ ὄν, τὸ ὑγιαῖνον, are never used by Aristotle or other writers in the abstract sense of ‘being(-ness)’ and ‘health’ (‘healthiness’) in a way similar to that in which substantivated adjectives such as τὸ καλόν may stand for ‘beauty’. To indicate their abstract significates requires the addition of either the *qua*-functor, as every student of the *Metaphysics* will know: τὸ ὄν ἢ ὄν, or the use of the verb’s infinitive, like τὸ εἶναι, τὸ βαδίζειν.<sup>193</sup>

Unlike RMA, which is only concerned with the use of appellative nouns or noun-like expressions, the other rules bear on any linguistic expression in general, regardless of their being a simple significate or a compound one.

The *second* Main Rule concerns the absence of a clear-cut borderline between a linguistic expression (whether simple or compound) taken as a linguistic tool and its significate.<sup>194</sup> The most conspicuous

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form’, ‘ousia as the composite of matter and form’.

<sup>191</sup> See e.g. Kirwan (1971), 76; Guthrie VI, 204 and *passim*. Ross has misgivings about this Greek usage, saying (1949, 577) that it had very unfortunate results for Greek metaphysics. Cf. Kahn (1973), 461f.

<sup>192</sup> It is noticeable that, unlike English idiom, the Greek does not require for substantivation such ‘tiresome makeweights’ as ‘thing’ being added to the adjective or participle when substantivated in the singular (Guthrie V, 404, n. 1). Cf. Latin ‘omnium rerum’ as the genitive to ‘omnia’.

<sup>193</sup> This is clear from *Met. Z* 1, 1028a20-29, where abstract properties, such as ‘walking’ (τὸ βαδίζειν) are opposed to the concrete thing having the property (τὸ βαδίζον). Sometimes Aristotle plays on the double signification, e.g. *Met. K* 3, 1061a22-28, where ὁ δίκαιος stands for the just man (in the wider sense explained in *EN V* 1, 1129b11-1130a18) and ὁ ἄδικος should be taken to refer to the unjust man *qua* unjust (rather than ‘the completely unjust man’, as Ross has, II, 313).

<sup>194</sup> This absence is commonly recognized. E.g. Oehler (1984), 85f. and *passim*. Sometimes it is deemed a real deficiency, and criticized, e.g. by Ackrill (1963), 75f., who speaks of “a mere slip”. This rule is ignored by Patzig (1979, 40ff.) in particular; likewise in Seuren (1998), 12ff. (“Aristotle’s theory of truth: Where things went wrong”). Bäck (2000, 133) takes Aristotle “to switch back and forth, from speaking about words to speaking about real things — at any rate in the fragmentary texts that we have”, and to move “quickly and blithely back and forth between words and objects; the rapidity confuses” (134); cf. 136; 143; 147. Ackrill says (1981a, 362) that Aristotle “is notoriously willing to talk of ‘what x signifies or is’ even in contexts in which he is quite sharply contrasting names and their significance with things and their nature”. ‘Semantic ascents’ (i.e. shifts from talking of a thing to talking of its

sample is the use of λόγος for both phrase, definiens, or assertible as linguistic tools and their respective contents as expressed by these tools.<sup>195</sup> In fact, an expression's autonymous use is often not clearly marked off from its significative use.<sup>196</sup> A similar feature is found in another technical term in Aristotle, viz. συμπλοκή, which is indiscriminately used for the notion of combining both on the onomastic and the apophantic level (our section 2.31). Kahn rightly claims (1973, 366) that the Greeks rarely, and before Chrysippus (c. 280-07 B.C.) never systematically, distinguished the word or sentence as linguistic expression, i.e. taken as a mere utterance, from the meaning or content it expresses.<sup>197</sup> Let us regard autonymous use as a sort of self-reference, and baptize this Rule the rule of indiscriminate reference (RIR).

The *third* Main Rule of Aristotelian (and indeed Ancient) semantics, which also concerns simple and compound expressions alike, is closely connected with the former (RIR). It concerns the double sense of the phrase 'the content of an expression', i.e. that which is signified by it (its 'significate'), and can be labelled Rule of the multiple significate (RMS).<sup>198</sup> The phrase 'an expression's significate'

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name, and *vice versa*) are not uncommon in Greek authors. Many an interpreter suggests that this is just gabbling. So Cohen and Matthews say (1991, 93, n. 116) that "in discussing semantic matters, Ammonius (like Aristotle before him and ancient Greek philosophers generally) frequently fails to make clear whether he means to be talking about *words* or *things*".

<sup>195</sup> Similarly Latin 'sententia' is not only used for the content (διάνοια) of a sentence but for 'sentence' as linguistic tool as well.

<sup>196</sup> Cf. Ackrill's remark (1963, 110) on *Cat.* 10, 13b12: "The accusative and infinitive phrase which Aristotle here uses to refer to a statement ('Socrates is well') is later (14a10) used to refer to a state of affairs ('Socrates's being well')". Ackrill speaks of "a distinction that was perhaps not so clear to Aristotle". In a similar vein Ackrill judges (*ibid.*) that at 13b5ff. Aristotle "slides from talking of health, sickness, &c., to talking of 'health', 'sickness', &c.". In my view such distinctions are of no relevance to Aristotle's semantics of statement-making and categorization.

<sup>197</sup> It is noticeable that Kahn (1973, 365f.) seems to ignore our third Rule since he does recognise the double sense of the phrase 'the meaning or content of an utterance'.

<sup>198</sup> This is mirrored by the twofold use of σημαίνειν both said of linguistic expressions and persons. Liddell & Scott, s.v. III 3; Bonitz, *Index* s.v.; Ackrill (1963), 88 (on *Cat.* 5, 3b10); Sluiter (1997), 151ff. — In the discussion of the question how we can remember what is no longer present (*Mem.* 1, 450b18-451a2) RMS plays a pivotal role together with the *qua*-procedure by which the two senses involved in such cases are counter-balanced. A similar case is found at *SE* 25, 180b34-39, where Aristotle is playing on the ambivalence of τὰ λεγόμενα ἄδικοι ('things spoken of that are unjust' and 'things being spoken of, which is unjust'). By the way, against the common reading, a full stop should be put after εἶναι (b36), and a comma after ὠφέλιμα (b37).

can be used to stand for both (a) mental entities — what in the opening lines of *Int.* is designated (16a6-7) by ‘affections of the soul’ (παθήματα τῆς ψυχῆς) — i.e. things (states of affairs) *qua conceived of*, and (b) the things (states of affairs) signified taken as extra-linguistic entities. For example, the expression (sentence) ‘Socrates is a pale musician’ both stands for the mental entity expressed by the assertible ‘that-Socrates-is-a-pale-musician’ and the intended extra-linguistic entity or ‘real’ state of affairs of Socrates’s being a pale musician.

The fact that an expression’s significate can be taken in the two aforesaid ways — which unmistakably has its roots in the archaic Greek experience of the close relationship between Name and Thing<sup>199</sup> — does not mean that the Greeks did not in principle distinguish between things as they really are independent of the human mind and things *qua conceived of* (or believed or said to be), but merely means to say that whenever a mental state of affairs (πρᾶγμα) referred to by a linguistic expression is (truly or falsely) claimed to apply to the outside world, the extra-linguistic state of affairs still is a state of affairs *qua conceived of* and in its capacity of *being claimed* to apply.<sup>200</sup>

Whereas the three previous rules have bearing on the fact that linguistic expressions can have more than just one main sense, the *fourth* Main Rule of Aristotelian semantics allows the simultaneous application of different senses or nuances of the expressions, that is to say, their use on more than one semantic level at the same time. While the previous Rules (RMA, RIR, and RMS) bear on the possibility of multiple application of expressions in terms of ‘at one time this way, at another that way’, this Rule concerns the simultaneous application of their various nuances distinguished in the previous

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<sup>199</sup> This momentous feature of Greek culture (which is in fact shared by other cultures as well) is thoroughly dealt with in Kraus (1987), *passim*, esp. 19-24 (as found in mythical thought); 70-97 (Parmenides); 98-135 (Heraclitus); 147-67 (the relationship ‘Name-Thing’ as a philosophical problem); 195-202 (the φύσει-νόμῳ problem).

<sup>200</sup> A paradigmatic case of the concurrence of the Main Rules is found in the celebrated Aristotelian adage about the several senses of the phrase τὸ ὄν, e.g. at *Met. Z* 1, 1028a10: τὸ ὄν λέγεται πολλαχῶς, indiscriminately *and* at the same time meaning: “That which *is* so named [or: ‘is brought up as be-ing’] in many ways”, or “the term ‘be-ing’ has several senses”. The subject indiscriminately stands for both the linguistic expression and its content (RIR), but its content or significate as well should be taken in a twofold way, bearing, that is, on a mental entity *and* the corresponding extra-linguistic entity (RMS). In addition, our first two Main Rules (RMA and RSC) are in order: what is referred to by τὸ ὄν is simultaneously the *thing* being and this thing *qua be-ing*.

rules. Thus, with reference to RMA, the fourth Rule allows the application of a noun to cases in which it actually refers to an ontic property and its possessor *at the same time*, and in fact inseparably. Likewise this Rule makes it possible that an expression, whether single or compound, should be taken to simultaneously stand both for itself as a linguistic tool and its content (RIR), or for the two senses in which its significate can be taken (RMS). The Rule pertains to what is nowadays called 'double entendre'. Just as in music the technique of counterpoint ('contrappunto') involves the simultaneous sounding of two or more melodies, the semantic 'double entendre' involves the simultaneous conveying of two or more different senses, resulting in a harmonious semantic texture. Let me christen this rule, which is extremely important in Aristotle's manner of philosophizing, particularly in his rejection of Platonism, the Rule of Semantic Counterpoint (RSC). In point of fact, RSC is the device by which the ambivalence of expressions is made use of to its very limits.

The central books of *Met.* contain many examples of this use (particularly of the term οὐσία): a term simultaneously stands for an enmattered form and the composite possessing this form; e.g. *Met.* Z 8, 1033b17-18; 10, 1035a6-17 and b 1-3; 11, 1037a7-10; 16, 1040b22-23; H 3, 1043a29-b4. Likewise at M 1, 1076a13-15, and *Cael.* I 9, 278a13-15; *GA* I 5, 321b19-22; *PA* I 2, 716a27-30. In a similar vein the word οὐσία can be used to refer both to a thing's universal (specific or generic 'quiddity') and its hypokeimenon.<sup>201</sup> A particularly significant example is found at *Met.* Z 16, 1040b22-23: "[...] in general, nothing that is common is ousia, for ousia does not belong to anything but itself *and* (τε καί) to that which possesses it, i.e. of which it is the ousia." When Guthrie says (VI, 214, n. 2) that "evidently 'substance' refers to essence rather than to the concrete individual", he fails to recognize what Aristotle means; Guthrie's 'rather' is clearly contradicted by Aristotle's use of the connective τε καί which expresses the simultaneity.<sup>202</sup>

<sup>201</sup> E.g. *Met.* M 2, 1077a27, discussed in Ross II, 414f. (who less happily speaks of 'ambiguity'; see our section 1.72, and Annas (1979, *ad loc.*). At *An.* II 1, 412a1-22 οὐσία is discussed as semantically including matter, form, and the composite 'matter informed'. Likewise at *An.* II 7, 418b3-18 light is said to be the form of the light-ed, coloured thing, and also this thing as being coloured. For the general issue, De Rijk (1978), 96f. and (1980), 44.

<sup>202</sup> For other examples see *Met.* A 9, 991b1; Z 10, 1035a2; 11, 1036b35; 13, 1039a18; H 2, 1043a19 and b28; 4, 1044a15; Θ 7, 1049a36; M 5, 1079b36; *An.* II 1, 412a6; II 2, 414a15. Cf. οὐσία *plus* genitivus used to indicate the thing itself (Bonitz *Index*, p. 546a2-4: "interdum οὐσία prope ad periphrasin ipsius rei delitescit"). E.g.



This simultaneous use on two different semantic levels is less strange than it seemed to some interpreters, provided we take the term 'being-ness' in its basic sense of 'the ontic cause owing to which something is given',<sup>203</sup> i.e. in its physical or mental 'existence':<sup>204</sup> whilst the 'being-ness of the ὑποκείμενον is merely extensional and concerns the level of a thing's rudimentary presence in the capacity of acting as an underlying thing, the other three senses involve intensional aspects of being-ness, bearing on the (partial) quidditative modes of being that are constitutive of a thing's physically being there, and their conceptual implications ('being a genus', 'being universal').

This use is not confined of course to the word οὐσία ('beingness') itself, but also applies to any appellative noun, which, as a matter of course, conveys a categorial modification of beingness. Apart from the wealth of evidence found in the *Physics* and *Metaphysics*, this use occurs in Aristotle's other works as well, as, e.g., at *Resp.* ch. 20 (14), 477b23-30, where the key terms 'the moist' (τὸ ὑγρόν), 'the dry' (τὸ ξηρόν), 'the cold' (τὸ ψυχρόν) are used at the same time for the things of that nature and the properties involved, or rather refer to the things in question in so far as they enmatter precisely these properties. In such cases the simultaneity of senses does not exclude the actual dominance of one of the two senses, which appears to be the meaning the user particularly has in mind; but the other one is never entirely absent. As will be seen frequently in the present study, the ambivalence together with the varying dominance of the semantic levels is of utmost importance in Aristotle's strategy of argument. Confining myself to just one example for the time being: Aristotle's argument for the enmattered εἶδος as the true οὐσία entirely hinges on his application of Rule RSC, by playing on the ambivalence of the

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PA IV 5, 678a31: ἡ τῶν σπλάγχχνων φύσις = 'the entrails'; also 12, 693b6; GA I 23, 731a25. This can be compared to a similar use of φύσις, e.g. *Resp.* 11, 476a24-25: ἡ τῶν βραγχίων φύσις = 'the gills (of fishes)'; also HA III 2, 511b20; Bonitz, *Index* 838a8-41.

<sup>203</sup> *Met.* H 2, 1043a2-3: ἡ οὐσία αἰτία τοῦ εἶναι ἕκαστον. Cf. Z 9, 1034a31; 17, 1041a9-10; A 4, 1070b24-25; M 1, 1076a24-25; cf. 6, 1080b5-6; Δ 1, 1013a20-21; An. II 4, 415b12-13; EE II 6, 1222b15-16.

<sup>204</sup> When taken from the viewpoint of common usage, Guthrie's remark about εἶναι and its cognates (VI, 204, n. 1: "It is tempting to use 'existence' and 'existent' [cf. Düring 1966, 586, 597], but τὸ ὄν λέγεται πολλὰ ὥς, and existence is only one of the senses which it covers") is understandable, but he fails to realize that this usage blocks the correct understanding of these words' focal meaning of 'being somehow present to our mind'.

term εἶδος (meaning both the form taken as such and as enmattered in an hypokeimenon), and by deliberately allowing the dominance of one of the two meanings to vary.

Broadly speaking, this use of appellative nouns in general for both an enmattered form and the composite endowed with it at the same time, depends on the material or extensional identity of these two.<sup>205</sup> This extensional identity is an expression of *the* basic tenet of his ontology (argued for against Plato): no form can exist except as enmattered in the outside world. Although the metaphysician is surely entitled to conceive of a form by formal abstraction apart from its hypokeimenon, he should not with Plato sublimise it and thus postulate a transcendent realm of eternal and changeless entities, let alone consider these entities the only true reality. Thus Aristotle's intransigent rejection of any transcendent domain of being is at the basis of RSC.<sup>206</sup>

A special case of RSC is where this rule bears on a thing's (predominant) *coincidental* property. Whenever this property is taken together with its substrate (like in 'pale man' or 'hot blood') the problem arises whether we should take such phrases to stand for a *man*, who is pale (or blood, which is hot) or for a 'pale-man' ('hot-blood'), precisely in its capacity of possessing paleness (heat). To address the semantic problem of defining compound things (σύνθετα) that are named after a form from a non-substantial category by a substantiated expression ('the pale', 'the hot'), Aristotle uses a semantic artifice which I have labelled 'the ἰμάτιον trick', which consists in bringing up coincidental unities like 'pale-man' as though they were quidditative unities (my section 9.32). On this line of approach, he deals with problems such as found at *PA* II 2, 649a14-27 (my section 12.34), "Is in 'hot blood' the property 'being hot' ('heat') an essential constitutive of blood?" and "Does 'blood' as such imply heat?"

To observe RSC is of major importance to the interpreter of Aristotelian thought, including the author's way of bringing it forward. For instance, the ins and outs of Aristotle's lore of the enmattered εἶδος as extensionally coinciding with the compositum in

<sup>205</sup> Note that this type of identity ('coextensiveness') is often indicated by Aristotle using καί explicativum.

<sup>206</sup> In his chapter on "Abstraction and the revelation of form" Guthrie seems to ignore the purport of formal abstraction (VI, 100-5), and regards Aristotle's *double entendre* practice as his using a language that is sometimes imprecise or inconsistent enough to lead us to believe that his forms exist separately.

which it inheres requires awareness of RSC. Another telling case where the continuous application of RSC is at the very basis of Aristotle's expositions is found in *Phys.* I, chs. 10-14 (my sections 12.31-12.36). Thus the Ancient and modern discussions<sup>207</sup> of Aristotle's claim at *Phys.* IV 14, 223a21-29 to the effect that Time cannot be without consciousness and human soul are considerably confused by ignoring Aristotle's propensity for RSC. Several Ancient and modern commentators have the idea that by claiming at *Phys.* IV 14, 223a21ff. that where there exists no one to do the counting, there is no 'countability' either, Aristotle flatly contradicts what he asserted at *Cat.* 7, 7b33-8a6. However, once you realize by observing RSC that in Aristotle ἀριθμητόν is indiscriminately used *in abstracto* for the property of countability and *in concreto* for (countable) *things* (which on occasion may be counted), it becomes clear that Aristotle's thought is completely consistent.<sup>208</sup>

### 1. 72 *Ambivalence vs. ambiguity*

In his discussion (1973, 232ff.) of the lexical values of εἶναι in the uses which might be recognized as typically existential, Kahn presents a list of four nuances or paraphrase values ('vital nuance', 'locative nuance', 'durative nuance', 'existential idea *sensu stricto*', approximately rendered by an existential quantifier). Such distinct nuances may be found together, and are surely not so different that they would exclude one another or produce ambiguity. Kahn refers to Quine's distinction<sup>209</sup> between cases of strong ambiguity, when the same word in different senses can be both true and false as applied to the same subject, as in 'The feather is light (in weight) and not light (in colour)', and cases of weak ambiguity, where differences in sense are correlated with differences in extra-linguistic application in such a way that contradiction can scarcely arise, like in Quine's example of 'hard chairs' and 'hard questions'.

However, what Kahn has in mind when he talks of nuances and paraphrase value, is a weaker contrast still, for the nuances meant

<sup>207</sup> See e.g. Sorabji (1983), 90ff.; my section 12.32.

<sup>208</sup> As a matter of fact, the structural importance of well observing in Aristotle different but related uses of the same word is commonly recognized by the commentators (e.g. Owen 1965 *passim*; Hussey 1983, 91), but the semantic impact of this Aristotelian usage is just as often neglected: the ambivalence is mistaken for sheer ambiguity.

<sup>209</sup> W.V.O. Quine, *Word and Object*. Cambridge Mass. 1960, 130.

may occur together in a single occurrence of a word without any effect of ambiguity. When elsewhere (403) he deals with another case of multiple significance found in the use of λόγος in Greek he points out the intimate connection between the three different nuances within the semantic area of one single lexeme ('discourse', 'rational account or rational principle', and 'reason' or 'rationality'), and recognizes considerable philosophical advantage in a terminology that brings together the concepts of language and rationality as essentially related, "as it were two sides of the same coin"; this 'ambiguity' "contains the seed of an important philosophic insight" (*ibid.*).

Kahn's remarks are quite to the point. However, his notion of 'ambiguity' [sic!, De R.] as a conceptual advantage<sup>210</sup> is baffling. Why should we not sharply distinguish between (advantageous) 'conceptual ambivalence' and '(undesirable) conceptual ambiguity', which by definition (Lat. 'ambiguus' which is cognate with 'ambages' = 'circuitous path', 'meanderings', 'twists and turns', and means 'leading to both sides') is conceptually disadvantageous? While I fully acknowledge the problems of lexical ambiguity and the diverse senses in which a word can be used, the following rule of thumb can perhaps make clear what I have in mind when I oppose 'ambivalence' to 'ambiguity': The user of ambiguous speech can clear up the situation by firmly making a choice between the different senses involved, while the user of ambivalent speech (particular the poet) needs the semantic ambivalence of certain key terms in order to appropriately bring about his intentions; to eliminate one of the senses would result in one-sidedness or imbalance. Thus Aristotle could never claim that it is εἶδος which is the true οὐσία, period; to effectively avoid any shadow of Platonism, he must qualify this claim by saying that it is the enmattered substantial form qua enmattered, and, accordingly, i.e. from the extensional point of view, the substance itself qua that in which this form determinative of its being is invested. The philosopher needs the semantic ambivalence of the notion εἶδος to oppose the substantial form to its counterpart, matter, on the one hand, and at the same time give full weight to the intimate, unique connection between matter and form, on the other.<sup>211</sup>

<sup>210</sup> Also Kahn (1973), 461. Noticeably, the notion of semantic ambivalence does not feature in Kahn's book, and in the present sense not in Lyons (1977) either.

<sup>211</sup> *Pace* Balme (1987, 297), there is also no 'ambiguity' in Aristotle's use of ἑσχατον εἶδος for both the infima species and the individual (e.g. *PA I 4*, 644a23ff.). Balme should have taken his own remark (296: "But in fact the equivocity is both more extensive and more innocent") as quite a pertinent semantic observation.

Kahn's unclear and prejudicial appreciation of multiple significance was bound to make him descry only incidentally the philosophical advantage of conceptual ambivalence. In his discussion (*ibid.*, 453-62) of the nominalized forms of 'be' ('es-'), τὸ ὄν and οὐσία, he rather unexpectedly calls (461) 'essence' "the more Platonic use of οὐσία", which "Aristotle never abandons", a feature owing to which "the possibility of confusion is always present, and occasionally reflected in the translations". These observations led Kahn to evaluate the kernel of Aristotle's ontology as follows (a passage which serves in fact as the peroration of his entire book):

The troubled course of *Metaphysics* Z can be seen in part as an attempt, beginning with the concrete sense of οὐσία ("substance", as "the thing which is"), to reconcile this with the other notion of οὐσία as τὸ τί ἦν εἶναι ("what a thing is"). And there are passages in Aristotle where one is genuinely at a loss to know whether "substance" or "essence" is the appropriate rendering — or whether in this case the two concepts are in fact one. Consider, for example, *Met.* Λ 6, 1071<sup>b</sup>20 δεῖ ἄρα εἶναι ἀρχὴν τοιαύτην ἥς ἡ οὐσία ἐνέργεια. "Hence there must be a principle such that its being is activity". (In what precedes, 1071<sup>b</sup>5ff., we have the noun in the concrete sense of substance: αἱ τε γὰρ οὐσίαι πρῶται τῶν ὄντων). Similarly in the description of the Active Intellect at *DA* III 5, 430<sup>a</sup>18 τῇ οὐσίᾳ ὡς ἐνέργεια. It is probably no accident that this ambiguity between abstract and concrete readings of οὐσία is most acute — but also most harmless — in the case of immaterial entities such as the Active Intellect and the Prime Mover, where a genuine distinction between substance and essence can scarcely be drawn. For these, and for the πρῶται οὐσίαι of *Met.* Z 11, 1037<sup>a</sup>5, <sup>a</sup>28, <sup>b</sup>1-2, we have the case where the thing and its essence are strictly identical, just as a Platonic Form is in no sense distinct from the specific nature (φύσις) which it "has". In such a case there is no semantic distinction between the concrete (agent) and abstract (action) nominalization of εἶμι, that is, between τὸ ὄν and οὐσία, just because there is no conceptual distinction between the entity as such and its being-what-it-is.

Really, it is all a matter of appreciation.<sup>212</sup> The aim of the present

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Likewise Patzig (1979, 40f. *ad Met.* Z 1, 102810ff.) is wrong in speaking of 'systematic ambiguity'. In the final analysis, the supposed ambiguity is all a matter of 'scope distinction'; cf. the 'causation vs. participation' case in Neoplatonism; De Rijk (1992), 29-34.

<sup>212</sup> Bonitz, *Index*, p. 544a42-51 expresses himself more cautiously: "magna usus varietas [...] inde repetitur [...] praecipue quod ipse, cum philosophia omnino in indaganda τῇ οὐσίᾳ versetur (*Met.* H 1, 1042a5; Γ 3, 1005a21) non uni rerum generi exclusis reliquis omnibus hoc tribuit ut οὐσίαι sint, sed diversis rerum generibus quodammodo οὐσίας dignitatem assignandam iudicat; itaque usum Aristotelicum nominis οὐσία plene persequi esset ipsam Aristotelis philosophiam exponere"; cf. Guthrie VI, 204; my section 13.3. — It should also be borne in mind that ultimately

study is to disclose that by exploiting all the possibilities of speech, and on occasion extending them in quite a sophisticated fashion, Aristotle aptly applies semantic ambivalence recognizing in it “the seed of an important philosophic insight”. Indeed, Aristotle appears to exploit and expand each and every possibility of language to express his metaphysical positions as clearly as possible.

### 1. 73 *Modern parallels to the Main Rules*

Before I go on to present some examples taken from contemporaneous semantic behaviour, in order to show that Aristotle’s linguistic practice (as laid down in the above Rules) is less peculiar than it might seem at face value, it is perhaps wise to broadly refer to the role metaphor, metonymy, and in general transference of meaning from time immemorial have played in enriching our manners of expression (whether poetic or prosaic)<sup>213</sup>, especially the transfer from sensible to intellectual, from concrete to abstract.<sup>214</sup>

To be more precise, each of our four Main Rules find their parallels in modern usage. As for the first one (RMA), its use in common Greek matches modern languages (although English idiom is less hospitable in this respect than Greek, Latin, and some other modern languages). For instance, supposing there is a white wall in my classroom and I resentfully order: ‘That whiteness over there should be done away with’, I intend either to have the classroom enlarged, or to have the dazzling colour replaced with a relaxing pastel shade.

The semantic phenomenon featuring in our second Main Rule (RIR) is not entirely unfamiliar to modern usage either. Take cases such as ‘Sincerity is his most characteristic virtue and is, so to speak,

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both actual ambiguity (equivocity) and ambivalence are a matter of *using* language, rather than strictly lexical (‘usage’). In the important Parisian treatise baptized “*Ars Meliduna*” dating from about 1170, the anonymous author eagerly argues for the thesis that no term is equivocal in itself: it is in its context that a word’s meaning is determined (“*Ut generalius dicatur, omnis ista dictio dicitur accipi equivoce que in oratione posita facit ambiguitatem secundum diversas significationes vel consignificationes*” (ed. De Rijk 1967, 298). Thus ‘canis’ (meaning either dog, or dog-fish, or the constellation Sirius) is unequivocally used when we say of a silent dog or a dog-fish: ‘*Hic canis non latrat*’.

<sup>213</sup> Note that ‘prosaic’ aptly illustrates a transfer of meaning.

<sup>214</sup> Leaving aside the possible objections that can be raised against taking this view in its diachronic form (cf. Kahn 1973, 373-5), it can be claimed (with Lyons 1977 II, 548f.) that metaphor “is by no means restricted to what is often thought of as the more poetic use of language”. Quite understandably, new metaphors (‘creative usage’) usually evolve into clichés, or even fossilize.

his middle name', or 'The defendant listened unruffledly to the allegations, all of which he categorically denied', or 'These lines are not easily decipherable and make clear that the emotional author is of quite a different opinion'.

An amusing case can be added. In his comments on a general definition of the terms 'subject' and 'predicate', Kahn quotes from an older standard textbook on language<sup>215</sup> a passage which is "very carelessly written". He says about it: "We must forgive the more-than-Aristotelian insouciance [sic!, De R.] with which the subject of discourse is identified as a noun in one sentence, and as a person or thing in the next".<sup>216</sup>

The semantic phenomenon that is in order in our third Main Rule (RMS) is not unfamiliar to modern languages either. For instance, the *that*-clause (or dictum) contained in the sentence: 'That the ship went down with all hands orphanized many children' stands for an extramental entity (an event), whereas the same dictum as used in 'That the ship went down with all hands spread through the village like wildfire' refers to a mental entity, viz. the news about the wreck. A complex sentence such as 'That the ship went down with all hands was a complete disaster and bound to spread through the village like wildfire' is, however grammatically incongruous, quite intelligible. The same seems to go for 'Hannibal's march across the Alps wrought terrible havoc there (sc. because of his elephants), and caused panic and fear in Rome'.

Our fourth Main Rule of *double entendre* (RSC) may be generally compared to the use of metonymy. For instance, the primary sense of the word 'majesty', viz. 'regal dignity' is commonly transferred to the person endowed with this property. When we say 'His Majesty' of the King, the denotative element is predominant, and *eo ipso* the referent is not the person's regal dignity, but some particular [x] or [y]. How-

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<sup>215</sup> Edward Sapir, *Language: An Introduction to the Study of Speech*. New York 1921 (p. 119).

<sup>216</sup> A similar case is found in Sluiter (1997, 194), who puts the notions 'existing' and 'applying' on a par: "When we affirm or deny mentally that a *concept exists*, this will be either true or false. [...] the name 'goat-stag' has a meaning, but the name by itself cannot be said to be true or false, unless we affirm or deny its *existence* (present, past, or future)"; italics mine. Compare expressions such as "predicates are real things" (Cleary 1995, 94). On occasion, negligent usage is at the basis of an eager debate. Thus Balme's (1972) talk of 'individual *species*' (instead of 'individual *form*', the *forma* or *εἶδος* being that which is signified by the universally applicable term 'species') seems to have been part of the ardent polemic about the individual nature of Aristotle's immanent forms. See also my section 10.71.

ever, at the same time the properties of regal dignity, magnificence and grandeur are connoted in the actual denotation so that the use of this appellation in sentences like 'His Majesty slipped over a banana skin' seems unfitting or comical. Another example, taken from modern European parlance, is the indiscriminate use of 'Presidency' both as an abstract and a concrete noun, e.g. in 'The French Presidency, which only lasts six months, has to solve many tricky problems'.

As a matter of fact, in any use of appellative terms there is a certain intermingling of the denotative and connotative aspects. Supposing, a man of good report is arriving, and some journalist maliciously comments: 'The sly old fox is just about to enter the premises', his statement about the man's arrival is denotatively true enough, but will be rightly contradicted because of its connotation; truly speaking, to address a person in an insulting manner is only possible owing to the fact that any denotative use of appellative nouns is commixed with connotation. Or if we enter a flower-stand and ask the girl 'Give me those fresh red roses, please', the connotation of 'freshness' (or 'redness') may be so dominant that the girl understandably will draw my attention to other flowers which are more fresh (or of a deeper redness).<sup>217</sup>

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<sup>217</sup> Peter Abelard's (1079-1142) semantics even allows the intermingling of the denotative and the connotative levels of appellative nouns by playing on the time factor, e.g. 'puer' applied to someone who is or was a boy, and 'senex' to someone who is or was or will be an old man. Thus a name's meaning is reduced to a vague and confused level on which it only indicates a certain form's actualization at any time (present, past, future), or even in some 'possible world', as a result of which the appellative term, strictly speaking, primarily exerts its denotative function. Thus sentences like 'Hic senex erit puer' can be true, if said of a boy of, say, ten years of age with reference to the day or year after. A famous example is the way in which Buridan (c. 1292-1361) plays on the 'appellatio formae' in his reposte to Pope Clement VI with whom he had a violent quarrel about a girl when they were students at the Parisian university. The story goes that when as a Parisian master Buridan paid his respects to the new Pope at Avignon, and the Holy Father said to him "Tu, quare percussisti Papam?", Buridan answered "Pater, papam percussi, sed non percussi papam" ("Holy Father, I didn't hit the Pope, but the Pope is the one I hit"). In Late Medieval logic this 'stratificational semantics' (as I called it) was often applied in logical disputes; De Rijk (1981), 48-52; (2000a), 215-21.



## CHAPTER TWO

### STATEMENT-MAKING, CATEGORIZATION, AND ARGUMENTATION

In this chapter I shall deal with some semantic aspects of the three major items underlying Aristotle's way of philosophizing and strategy of argument: statement-making, categorization and argumentation. Contrary to a widespread (mainly didactic) view<sup>1</sup> I shall argue that it is statement-making, not conceptualization, that is elementary, because the latter naturally functions within the context of statement-making.<sup>2</sup> Let us therefore begin with Aristotle's views of statement-making.

#### 2. 1 *Aristotle's deep structure analysis of statement-making*

Throughout the tradition the anatomy of the Aristotelian statement-making utterance has been explained in terms of the dyadic copula construal 'S is P'. While of course we come across this grammatical 'S is P' construction in Aristotle as well as in common Greek (just as in many modern languages), I believe this is, in Aristotle's (deep structure) view of statement-making, not the basic one, but has become predominant owing to the commentaries by Ammonius and Boethius. In the present study an alternative, monadic analysis of Aristotle's statement-making utterance will be argued for, which, I take it, was indeed the one applied by Aristotle in his protocol language.

#### 2. 11 *'Predication' in Aristotle. The τὸ κατὰ τινός device*

Predication in Aristotle is commonly<sup>3</sup> understood and described in terms of the well-known copula construal: a 'predicate' (P) is said ('predicated') of a 'subject' (S). As will be shown in the following

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<sup>1</sup> This view is rightly questioned by Kapp (1942), 6, and Whitaker (1996), 1ff.

<sup>2</sup> Scholars such as Kapp and Whitaker have good reasons to question the usual order of the books of the *Organon*, including the underlying idea about the relationships between their contents.

<sup>3</sup> E.g. Oehler (1984), 84; Weidemann (1994), *passim*.

sections, the ‘S is P’ pattern is not only inappropriate but altogether misleading when it comes to expressing what Aristotle has in mind regarding the proper nature of statement-making.

Evidently Aristotle (as well as Plato) is familiar with the grammatico-logical procedure of assigning something to something else, in his words: λέγειν (or κατηγορεῖν) τὸ κατὰ τινός = ‘to say (or ‘predicate’) something about something else’; in modern terms, some predicate term conveying a ‘comment’ is said of a subject term referring to a ‘topic’. However, the Aristotelian procedure should be described in terms of appositively assigning an attribute (κατηγορούμενον) to a substrate (ὑποκείμενον), rather than ascribing a predicate to a subject by means of a copula.<sup>4</sup> Thus Aristotle’s analysis differs from the traditional one in at least one important respect: the ‘comment’ should be considered an attribute which is said to fall to a substrate, without understanding this procedure in terms of sentence predication. For instance, to utter the affirmation (κατάφασις) ‘A man is wise’ is to assert that the entity ‘wise man’ is the case, whereas the denial (ἀπόφασις) ‘A man is not wise’ will come to asserting that this entity is not the case.<sup>5</sup>

Aristotle’s semantics of the λόγος ἀποφαντικός or statement-making utterance (comprising ‘assertion’ and ‘de-assertion’ or ‘denial’) involves two main types of affirmation and denial (*Int.* 10, 19b14ff.). The first one (19b14-19) — which came to be known ‘de secundo adiacenti’ — is called ‘primitive affirmation and negation’, and is composed of a simple substrate and the formula ‘is (not) the case’ (e.g. ἔστιν ἄνθρωπος and οὐκ ἔστιν ἄνθρωπος, meaning ‘A man is’ and ‘A man is not’). Thus in primitive assertions and denials existence is assigned to or denied of some substrate-subject. As will be shown presently, Aristotle does not take primitive assertions and denials to satisfy his concept of saying ‘something of something’ (τὸ κατὰ τινός). As a matter of fact, they are merely ‘existence claims’ and do not play a significant role in *Int.* What they intend to represent is accomplished in the doctrine of *APo.* by what in the preparatory stage of the epistemonik procedure features as ‘identification of the object under examination as satisfying a certain quiddity’ by stating ‘This is a F’ (‘This is a man’).

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<sup>4</sup> The inadequacy of the copula pattern ‘S is P’ will be extensively discussed in my sections 2.15-2.16.

<sup>5</sup> The phrase ‘is (not) the case’ (which admittedly conflicts with English idiom in this context) expresses Greek ἔστιν and οὐκ ἔστιν.

Before I go on to make clear that the primitive affirmation and negation, which, as we said, are merely existence claims, definitely do not satisfy Aristotle's concept of 'saying something of something', it is useful to emphasize that to Aristotle, 'being' is not some 'thing'. Rather it is an empty container, not significative, but merely co-significative, and serves for making up some 'thing' only when it is attached to a significative categorial notion.<sup>6</sup>

So far Aristotle's interpreters have failed to realize that Aristotle's tool τὸ κατὰ τινός does not apply to his primitive assertions and denials, and only brings into play the so-called 'de tertio adiacenti' statements,<sup>7</sup> expressing the assignment or denial of some categorial attribute to a substrate. In keeping with what was indicated before, Aristotle's 'de tertio adiacenti' statement should be taken in terms of a 'compound assertible' or 'complex' (containing a substrate-attribute arrangement) whose 'being the case' is asserted or denied. In addition, it is important to realize that the compound assertible always consists of notions taken from *different* categories. The proper assessment of the τὸ κατὰ τινός issue can be gathered from the discussions of one of the most prominent philosophical problems of the fourth century, the 'one thing — many names' issue.<sup>8</sup>

The sophist Antisthenes (c.440-c.365B.C.) is famous for his rejecting the idea that something can be named in a non-tautological manner, a position, indeed, that even led him to deny any possibility of contradiction.<sup>9</sup> The Antisthenian thesis is what Plato was referring to in the *Sophist* (251B6-C6) when he dismissed what he calls the 'trivial question' about the 'one individual — many names' issue as "merely entertainment for the young and late-learners". According to this thesis a thing bearing many names must itself be many instead of one, so that, for example, you can call a man only 'man', a stone only 'stone', and cannot refer to things by calling them, say, 'the good' or 'the white' <thing>. In point of fact, this issue has everything to do

<sup>6</sup> The verb εἶναι is only qualified for being called ῥῆμα because it satisfies *one* of the latter's characteristics (*Int.* 3, 16b6-10), viz. to additionally signify or co-signify time' (*Int.* 10, 19b14). Small wonder that in Medieval logic (e.g. by William of Ockham) 'est' was treated as a 'syncategorematic' term.

<sup>7</sup> For this term see *Int.* 10, 19b19ff.; my section 3.73.

<sup>8</sup> Tugendhat's (1958, <sup>3</sup>1982, 1-36, and *passim*) discussion of this issue in Plato and Aristotle is obscured by a Heideggerian thicket.

<sup>9</sup> Aristotle, *Met.* Δ 29, 1024b32-34, where, properly speaking, no reference is made to tautological sentence predication, but giving tautological names to something. Cf. *Top.* I 11, 104b21, Isocrates, *Helena*, cap. 10. The position is discussed in De Rijk (1986), 115-22, and my section 8.42.

with what Plato taught about the nature of true and false speech in *Sophist* 262E4-263D5.<sup>10</sup> Whenever there is a statement (λόγος), Plato claims, it must concern something, and cannot be about nothing. Now, what is it about? you may ask. Taking the simple assertion ‘Theaetetus sits’, it is obvious, Plato says, that it is about Theaetetus and concerns him. It is concluded that any assertion is ‘of something’ (τινός) and ‘about something’ (περὶ τινός).

*Pace* the usual interpretation, this formula is not pleonastic. The opposition between ‘what it is about’ (περὶ οὗ) and ‘whom it concerns’ (ὅτου) is connected with Plato’s vital distinction between the topic (ὄνομα) part of the λόγος and its comment (ῥῆμα) part, a distinction that plays the key role in his solution to the problem of falsehood (263A11-D5). The nucleus of his account is the contradiction between the semantic areas covered by the two respective devices, ὅτου and περὶ οὗ.<sup>11</sup> Of course, the referent of both formulas is one and the same person or thing (in Plato’s example, Theaetetus), but the former device takes him as a hypokeimenon, while the latter refers to him including his appurtenances, or rather takes these appurtenances as found in Theaetetus.

While in the Lexicon, *Met.* Δ 29 Aristotle confines himself to exposing Antisthenes’s naive position, in his discussion with the opponents of the Law of non-contradiction (LNC) in *Met.* Γ 4, 1006b13ff. he treats the ‘one thing — many names’ issue more thoroughly. He accuses the opponents of blurring the distinction between ‘to signify about some one thing’ (τὸ ἐν σημαίνειν) and ‘to merely signify about some one thing’ (μόνον καθ’ ἑνός σημαίνειν),<sup>12</sup> and argues that to assert that an attribute falls to some ‘one thing’ (i.e. a ‘quidditative unit’) does not entail the *quidditative* oneness of the ‘one thing *plus* attribute’ compound. For instance, to correctly assign to the quidditative unit, the man Socrates, the coincidental modes, ‘being educated’ and ‘being pale’ by naming him ‘an educated pale man’, does not entail that the entire compound ‘educated-pale-man’ is a quidditative unit; it still remains a coincidental unit. On the other hand, a multiplicity of (quidditative) names all belonging to the same category, like ‘man’, ‘animal’, ‘body’, does not affect the quidditative oneness of their common referent, and, consequently, to refer to

<sup>10</sup> These paragraphs, which are fundamental to Plato’s semantics of statement-making, are discussed in De Rijk (1986), 202-9.

<sup>11</sup> De Rijk (1986), 205ff.

<sup>12</sup> My section 7.72 of the present work.

Socrates as, say, ‘a rational two-footed animal’ is still to signify some ‘one thing’, and not to signify things *about* some one thing.

Evidently the phrase σημαίνειν κατὰ τινός or καθ’ ἑνός does not formally entail the quidditative oneness of the substrate including the modes of being assigned to it; what is referred to is the extensional unity of the substrate and its coincidental modes of being taken from categories other than its own. For the same reason, the formal difference between ‘being a man’ and ‘being pale’ or ‘being educated’ does not affect the extensional sameness of the latter modes of being and ‘man’ in Socrates, so that, although the formal difference ‘being pale’ and ‘being a man’ allows us to qualify ‘being pale’ as ‘not being a man’, from the extensional point of view we are not entitled to say that pale Socrates is not a man.

In a similar way, in *APo.* I 22 quidditative naming is contrasted to calling things after one of their coincidental modes of being, and once again the κατὰ device is pivotal as opposed to what in this context is called ‘to signify subsistent being’:

*APo.* I 22, 83a24-32: The terms signifying subsistent being (τὰ μὲν οὐσίαν σημαίνοντα) signify of what they are said of just what is that thing (ὅπερ ἐκεῖνο) or just what is a particular sort of it (ὅπερ ἐκείνόν τι), but whatever does not signify subsistence but is said of something else as its substrate (κατ’ ἄλλου ὑποκείμενου λέγεται) <signifies> what is neither just what is that thing nor just what is a particular sort of it, viz. coincidental things (συμβεβηκότα), e.g. saying of (κατὰ) the man ‘The pale thing’. For the man is neither just what is white nor just some white thing (οὔτε ὅπερ λευκὸν οὔτε ὅπερ λευκόν τι) but, of course, animal; for a man is just what is an animal (ὅπερ ζῷον ἐστίν). But whatever does not signify subsistent being must be said of some substrate, and there cannot be anything pale that is pale without being some different thing.<sup>13</sup>

Summing up our findings about Aristotle’s theory of predication as couched by the τὶ κατὰ τινός device we can state that:

<sup>13</sup> My section 6.39. Cf. *ibid.* I 4, 73b5-8: “That which is not said of something else as its substrate in the way in which that which is walking is walking while being something different, or what is pale is pale [reading with Ross τὸ λευκὸν (λευκόν)], while subsistent being and whatever signifies a ‘this’ is just what it is without being something else”; my section 6.34. A similar role is played by the above-mentioned devices in the *Phys.* I 3, 186a33-187a11. See also *An.* III 6, 430b28-29, where the fallibility of discursive reason is discussed in terms of the τὶ κατὰ τινός device: “Thinking of <an object’s> being in terms of its quiddity is always true, and is not thinking something of something else but, just as the seeing of the proper object <of sight> always true”. This is opposed (b29-30) to a τὶ κατὰ τινός utterance such as one concerning a man’s being pale or not, which is not always true.

(1) 'predication' should not be taken in the sense of sentence predication in terms of the traditional copula construal 'S is P', but rather as an appositive attribution in terms of a monadic construct composed of an assertible and an assertoric operator;<sup>14</sup>

(2) the word τί in the τὸ κατὰ τινός phrase is used to indicate that which is expressed by the attributive term and does not designate the substrate quidditatively, but according to coincidental appurtenances 'about it'.

From (2) it follows that:

(3) properly speaking, Aristotle's theory of statement-making does not include existence claims as expressed by so-called 'de secundo adiacenti' statements;

(4) Aristotle's theory of statement-making only concerns 'de tertio adiacenti' assertions whose assertibles are a compound of notions from *different* categories which refers to a coincidental unit of a substrate and its attribute(s).<sup>15</sup> Assignments concerning attributes of the same category as the substrate (e.g. 'animal' said of 'man' or 'colour' said of 'whiteness') are subject to the transitivity rule of *Cat.* 3 (my section 4.25).

## 2. 12 *The monadic analysis of Aristotelian statement proposed by Matthen*

In the deep structure representation of the statement-making utterance the verb εἶναι has the key role. As we saw, taking the usual 'S is P' notation, a thought of, e.g., a man's being pale or a man's running is rendered thus: 'A man is pale', 'A man is running'. In this notation, the statement (assertion) consists of a subject term (S) and a predicate term (P), which are connected by the so-called 'copula' ('is'), or disconnected by 'is not' in cases of a negative statement. However, as far as Plato and Aristotle are concerned, there are strong reasons to question the usual view and notation.<sup>16</sup>

In order to make sense of Aristotle's semantics of the statement-making utterance (λόγος ἀποφαντικός) it is of primary importance to

<sup>14</sup> See my sections 2.12-2.14.

<sup>15</sup> In a similar vein the coincidental unity expressed in phrases like 'pale-man' is contrasted by Aristotle at *Met.* Z 12, 1037b14ff. with definitional unities such as in 'two-footed land animal', in which the elements all belong to the same category. Cf. the πρόσθεσις issue (of 'adding determinants', e.g. *Met.* M 2, 1077b9-11); Cleary (1995), 305.

<sup>16</sup> For Plato see De Rijk (1986), 194-206; 313-26; 343-52. In point of fact, the origin of the modern copula construct 'S is P' dates back to as late as around 500 A.D. (Ammonius), as will be argued for below.

understand its anatomy. On the common interpretation, the copula in 'S is (not) P' is held to be a dyadic operator acting as that which links up ('copulat' in Latin) the subject term with the predicate term. However, there is an alternative view argued for by Mohan Matthen.<sup>17</sup> In an epoch-making paper on Greek ontology and the 'is' of truth he discusses (1983, 119-21) Kahn's account of the semantics of 'is' in philosophical contexts. In Matthen's report of Kahn's view, the copula has two functions. It connects the predicate(-term) to the subject(-term), *and* states the truth of the sentence. There is, Matthen takes it, an essential ambiguity in this second function of 'is': it can be taken not only as saying that the sentence in which it occurs is true, but also that the fact 'corresponding' to that sentence 'is-so', or 'obtains' (119). Matthen then joins Kahn in carefully distinguishing between 'being-so' and 'existence': the former phrase applies to facts, while 'existence' applies to individuals.

As we saw before (sections 1.71 and 1.72), what Matthen calls (in the wake of Kahn)<sup>18</sup> an 'essential ambiguity' instead concerns the ambivalent meaning of λόγος, which is used to stand for both the linguistic expression ('sentence') and its content (our πρᾶγμα or 'state of affairs').<sup>19</sup> Besides, Matthen's talk of a 'fact corresponding to the sentence' is dangerously equivocal: he seems to indiscriminately take 'fact' for the content of the sentence (mental state of affairs) and its denotatum in the outside world (physical state of affairs). This equation of 'sentence's content' and 'fact' is inadmissible. First of all it jeopardizes the assessment of false sentences, which by definition do not correspond to facts.<sup>20</sup> Likewise the semantic description of statements about the past or the future becomes problematic.

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<sup>17</sup> Argued for by Matthen (1983), 125-31 (cf. Matthen 1988, 172-4) for Aristotle, and adapted for Plato by De Rijk (1986), 194-202; 313-6 and (1987), 27-33; 43f.; 50-2; 60, n. 60. See also Rapp (1991), 127f.

<sup>18</sup> Matthen's view is mainly based on the synoptic view presented in Kahn (1966).

<sup>19</sup> For that matter, Kahn's and Matthen's sharp opposition of 'is true' and 'obtains' also has much to do with English idiom not allowing one to say e.g. \*'Socrates is the case' or \*'That Socrates is pale exists'. This is quite unlike the Greek's use of strong-hyparctic 'be' (ἔστιν), which can be indiscriminately used for a 'judgement of existence' and as an operator to assert an assertible. It should be pointed out, however, that when at the end of his paper (127), where he deals with the question whether Aristotle analyses truth in terms of existence, Matthen proposes to take Aristotle as saying "that truth, which is applied to propositions, can be analyzed in terms of existence applied to another sort of thing".

<sup>20</sup> As a matter of fact, Matthen's discussion (119) with David Wiggins on Plato's problem of Non-being is substantially obscured by this equation.

Supposing (with Matthen, *ibid.*) that after being pale for some time ( $t_1$ ) John now ( $t_2$ ) acquires a tan and can no longer be called 'pale', no doubt the physical fact of John's being pale at  $t_1$  made 'John is pale' true and at  $t_2$  makes 'John was pale' true. However, this cannot mean that the content (mental state of affairs) of 'John is pale' is the same as that of 'John was pale'; if this were so, a liar can no longer be caught. We will see shortly that this very confusion about the notion 'fact' also vitiates Matthen's correct plea for an alternative account of the 'is' of truth.

Matthen is quite right (123) that in *Int.* Aristotle never explicitly mentions dyadic 'is' acting as a copula between a subject term and a predicate term; but he does mention monadic 'is' as *attached to* what Matthen is going to call a 'predicative complex'. In what he puts forward (124) as "a somewhat conjectural suggestion" Matthen proposes to take Aristotle as "assuming (...) that all uses of 'is' correspond to a monadic use, and in particular that in sentences of the 'S is P' form, a transformation is to be made in which the copula is made monadic by moving its complement to attributive position". In such cases the monadic 'is' would be attached not to a simple noun or a verb (rhema), but to a complex term. A complex term then consists of a noun modified by a predicable-denoter in attributive position. As a matter of fact, the monadic 'is' can also be attached to a simple term (such as 'man' or 'running') to make up a sentence expressing an individual's existence.

To explain the semantic paradigm of the transformed 'subject-copula-predicate' sentences, Matthen introduces (125) the notion 'predicative complex', and defines it thus: "an entity formed [...] from a universal and a particular *when that particular instantiates that universal*" (his italics); the latter determination is elucidated by pointing out that "the predicative complex consisting of  $x$  and  $F$  does not exist when  $x$  does not instantiate  $F$ ". So what he primarily suggests is that terms consisting of a substantive (denoting an individual) with an adjective (defined by Matthen as 'predicable')<sup>21</sup> in attributive position refer to such complexes if they refer to anything at all. Taking Matthen's example, 'artistic Coriscus' will refer to a predicative complex if Coriscus is artistic, and to nothing otherwise.

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<sup>21</sup> Matthen uses the term 'predicable' in an equally harmless sense ('what can be predicated') as is found with logicians up to the twelfth century, such as Peter Abelard (my section 5.24). I prefer to speak of 'assertible'.



2. 13 *The semantic paradigm of assertions with 'is' as an assertoric operator*

Matthen's assumption about the way in which in his analysis of the statement-making utterance Aristotle might have been transforming the grammatical 'S is P' construal into a 'substrate-attribute' construct is quite plausible, and is far less conjectural than he himself suspected, because it finds strong support in Aristotle's texts, not only in *Int.* but in his other works as well (see my sections 2.15-2.16). However, we have to take exception to some elements of Matthen's position.<sup>22</sup>

First a minor point concerning the label 'predicative complex'. It must strike the reader that although in his proposal the technique of moving the predicative complement of the 'S is P' construal to attributive position is substantial, Matthen keeps talking of 'predicative' instead of 'attributive' complex. It will be shown in the following sections that even the slightest allusion to the copula construction should be avoided. To rule out any resemblance with the dyadic 'S is P' construct, it is preferable to take the complex to consist of a substrate or hypokeimenon *plus* an attributive determination, and regard it as a verbless phrase or just 'something assertible', which can be affirmed or denied by using the assertoric operator 'is' or 'is not', meaning 'it is (not) the case' or 'it obtains (does not obtain)'.<sup>23</sup>

What is worse is that to Matthen (125), his predicative complexes correspond rather closely to certain modern conceptions of facts, and to Russell's conception of a true proposition. Why should they correspond to *true* propositions<sup>24</sup> alone? Does the transformation not apply to false sentences too?

In a similar vein, the predicative complex is defined by Matthen as the denotatum of e.g. 'Coriscus-artistic' or 'artistic-Coriscus' (Κορίσκος μουσικός). By calling it the denotatum, Matthen obviously no longer takes the predicative complex as a (propositional) significate (e.g. the thought 'that-Coriscus-is-artistic'), but as its referent in the

<sup>22</sup> De Rijk (1987), 43f.

<sup>23</sup> Kahn (1973, 49) rightly rejects the view that "a substance-attribute metaphysics or, more generally, an entity-property distinction is a projection onto the world of the noun-verb or subject-predicate structure of sentences in Greek and cognate languages", and proposes the opposite hypothesis: "namely, that the appearance in many or most languages of a noun-verb distinction, and hence of a subject-predicate sentence structure as well, is the reflection within grammar of certain fundamental conditions underlying all human use of language". Kahn could strengthen the plausibility of his hypothesis, I think, by replacing the pairs 'noun-verb' and 'subject-predicate' with 'noun-attribute' and 'substrate-property'.

<sup>24</sup> Note that in this case 'proposition' is taken in the modern sense = 'dictum' or 'that-clause'.

outside world, viz. the physical state of affairs or ‘fact’ that-Coriscus-is-artistic. Matthen is quite explicit (and consistent) on this score by noting (*ibid.*) that unlike the Russellian entity corresponding to ‘Coriscus is artistic’, which could be referred to as ‘Coriscus *being* artistic’, the Aristotelian entity is more properly called ‘Coriscus-artistic’ or ‘artistic Coriscus’. Once again, what can we do with impossible complexes like ‘the commensurate diagonal’?

The basic problem with Matthen’s proposal, as it stands, is that he puts his predicative complex taken qua (mental) significate and qua (physical) denotatum entirely on a par, just as he has a confused notion of ‘fact’ (119; see my previous section) by using this word indiscriminately for any content of a *that*-clause, including mere thoughts.<sup>25</sup>

All things considered, I would propose to take Aristotle’s emphatic ἔστιν as a monadic operator asserting the significate of the dictum or *that*-clause (taken in the modern sense) that acts as its operand. Taken thus, Aristotle’s examples of sentences containing the emphatic ἔστιν put at the head of the sentence are his protocol transformations of colloquial (surface level) ‘S is P’ assertions. If the operand is taken by itself as just an unapplied ‘attributive complex’ or ‘assertible’ it is the equivalent of an ‘S is P’ construct written down as a sentence on the blackboard without any truth-claim. In line with what we have stated in our section 2.11, this ‘assertible’ is to be taken as a compound of a substrate and an attributive determination from another category, e.g. ‘a (the) man’s being running’, or ‘a (the) man’s being pale’, such that the corresponding assertion takes the form:

‘Is: [a (the) man&run)’s be-ing<sup>26</sup>], or ‘Is: [a (the) man&pale)’s be-ing]’,

<sup>25</sup> Matthen’s problem (127) with the traditional, most straightforward reading of *Met. Δ* 7, 1017a33-35 (“E.g. ‘Is: [Socrates’s being educated]’ means that this is true, etc.” (see my section 8.51) is due to a similar case of ignoring that ‘being true’ is said of linguistic tools, and ‘being the case’ of their contents, while saying that ‘facts’ are true or the case is tautological. In addition Matthen of all people does not seem to realize that if ἔστιν is here taken as monadic there is no room for taking it as “predicating anything of the whole sentence in which it occurs”, so that you *must* take it as attached to its assertible alone. Thus nothing should prevent us from rendering the emphatic ‘Is’ straightforwardly as ‘Is true’.

<sup>26</sup> This ‘be-ing’ is the ‘connotative’ being-ness which is included in any categorial mode; my section 1.64. That the present notation is representative of Aristotle’s deep structure view of the statement-making utterance will be argued for in my next section. Incidentally, the fact that I take this ‘be-ing’ as connotative entails the rejection of any Russellian or Fregian formulas such as ‘Coriscus *being* artistic’, in which the ‘being’ seems to have copulative force.

indiscriminately meaning 'A (the) man runs', or 'There is a running man', and 'A (the) man is pale' or 'There is a pale man'.

In my view of how Plato and Aristotle conceived of the deep structure of the statement-making utterance, any dyadic function of 'is' (as a 'connective' or 'copula') is entirely out of the question, since the λόγος by itself is already a composite expression combining an onoma and a rhema, making up a συγκείμενον.<sup>27</sup> Thus the procedure of speaking truly (ἀληθεύειν) and speaking falsely (ψεύδεσθαι) is basically a matter of rightly (or wrongly) asserting or denying an assertible, to the effect that to assert or to deny amounts to giving one's assent to, or dissenting from one and the same assertible.<sup>28</sup>

The use of orthotone ἔστιν in the sense (i.e. the translation value) of the operator 'obtains' or 'is the case' is not only explicitly indicated by Aristotle,<sup>29</sup> but also sufficiently evidenced in Greek literature in the overwhelming number of cases in which declarative sentence patterns occur, including a truth claim on the side of the speaker or writer, which is signalled by his use of the indicative mood. On this view, any declarative sentence, such as the surface construct 'War is the father of everything' (Heraclitus, fr. 50) is to be interpreted at the deep structure level thus: 'It is true (it is the case) that War is the father of everything'. It should be remarked, however, that in the monadic analysis of the statement-making utterance as argued for in the present study to apply to Aristotle's protocol language, the only formal mark of declarative force is the assertoric operator, while 'predication' (in our terminology, 'attribution') is not the formal condition of declarative sentencehood, nor of any other sentencehood ('questions', 'wishes', 'commands'), since the attribution only occurs within the operand, and thus when taken by itself, is non-declarative ('non-assertoric').<sup>30</sup>

<sup>27</sup> Below, *ad Int.* 3, 16b25. At *An.* III 6, 430b5-6 it is explicitly claimed that "in each and every case, that which unites is the mind".

<sup>28</sup> See also my sections 2.34 (*ad fin.*) and 2.35 (*ad fin.*). At *An.* III 3, 427b5-6, it is implied that an erroneous assertion contains the same assertible as the true one: "It appears that in the case of contraries <the object of> error and <that of> true knowledge are the same". In a similar vein Medieval logicians argued for the same 'significate' of 'Deus est' and 'Deus non est', namely 'Deum esse'.

<sup>29</sup> *Met.* Δ 7, 1017a31-32 (my Vol. II, section 8.23); *APr.* I 46, 52a32: "The expression 'it is true' stands on a similar footing to 'it is'".

<sup>30</sup> On this view, problematic observations as made (or questioned) in Kahn (1973), 187-94, on the finite verb as the mark of declarative sentencehood are immaterial. Generally speaking, by his reducing ὑγιαίνειν to ὑγιαίνων ἔστι and making the participle a part of the operand, Aristotle in advance brushes aside any embarrassment to be caused by the finite adjectival verb. As we saw already, some of

## 2. 14 Aristotle's protocol language of the statement-making utterance

As mentioned before, unlike the well-known 'S is P' construal, Aristotle's statement-making utterance ('assertion') is a monadic construct consisting of an assertoric operator and an 'assertible' that functions as its operandum or argument. The operator is the strong form of hyparctic 'be', for the most part the impersonal indicative of the present tense (ἔστι = 'is the case'); but sometimes the past or future tenses (ἦν = 'was the case', or ἔσται = 'will be the case'), or modal forms (e.g. ἀναγκαῖόν ἐστιν = 'it is of necessity the case') are used. The operand or 'argument' (our 'assertible') is a nominal construct, which equals one of the following in English: gerundial phrase, infinitival phrase, *that*-clause.

The operandum or assertible is a compound consisting of a substratum, which is indicated by a noun or substantivated adjective, and its attributive determination, which is expressed by a rhema (either adjectival or verbal).<sup>31</sup> The two (or more) notions making up this compound are taken from different categories,<sup>32</sup> and are linked up with one another by the connotative (intensional) be-ing they include qua categorial mode of being.<sup>33</sup> A fully-fledged assertion consists of an assertible and an assertoric operator ranging over it, e.g. 'Is: [(a man&pale)'s be-ing]', which has the (indiscriminate) trans-

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Aristotle's contemporaries objected to the periphrastic use of εἶναι, while in the Ammonian-Boethian tradition the analysis of e.g. 'Plato legit' into 'Plato est legens' is considered essential to the statement's basic structure. In the Renaissance, Lorenzo Valla (1405-57) took exception (*Retractatio totius dialectice cum fundamentis universe philosophie* II, 180; *Repastinatio dialectice et philosophie* II, 450f.; ed. Gianni Zippel. Padua 1982) to this resolution, albeit on purely grammatical grounds: "Quod plane rude et inscitum est; nam ut taceam quod quedam verba resolvi sic nequeunt, ut 'luna illuminatur', participium resolvitur in verbum, non verbum in participium. [...]; participium continet verbum, non continetur a verbo" (*Repastinatio*, p. 450<sup>27</sup>-451<sup>2</sup>). Valla's definition of the enunciation is simply amusing: "[...] contenta nomine et verbo, tamquam viro et uxore [...] veluti una domus [...], ut 'Plato legit': 'Plato' enim, quod est nomen, tamquam vir erit, quia verbo preest atque imperat quasi uxori" (*Retract.* II, 178<sup>5-15</sup>). — Bäck's (2000) proposal to interpret Aristotle's theory of predication in terms of an 'aspect theory' will be dealt with in my section 2.17.

<sup>31</sup> My sections 3.26-3.28. In my notation the assertible is bracketed off: '[...]'.

<sup>32</sup> Sentences containing only components from the first category, such as 'Man is an animal', are not included, and are treated differently in the Aristotelian argumentative procedure; my section 2.11.

<sup>33</sup> My sections 1.64 and 1.51-1.52. In my notation this fused notion of 'be' is expressed by the word 'be-ing' appended to the (components of the) assertible, whereas the link between its components is designated by a subscribed connective '&', e.g. '[(man&pale)'s be-ing]'.

lation value of 'There is a pale man' or 'A man is pale'. Negative particles may be added to one or both of the categorial components and to the operator as well, e.g. 'Is not: [(a not-man&not-just)'s be-ing]'; the several variations of this procedure are dealt with by Aristotle in *Int.*, ch. 10 (my sections 3.73-3.75).

One might be inclined to regard the notion 'be' contained in the various arguments as copulative instead of connotative. However, no copula is needed to couple, say, the semantic value 'pale' with 'man', because, in Aristotle's view, both notions by themselves include connotative be-ing. Thus connotative or intensional be-ing enables the two categorial modes of 'being-a-man' and 'being-pale' to form a natural fusion (in our notation: '[(man&pale)'s be-ing]', which neatly represents the ontic unity of the two particular forms, manhood and paleness as enmattered e.g. in Socrates.

## 2. 15 *The copula-less exegesis evidenced*

Much evidence can be brought forward in support of the monadic analysis of Aristotle's statement-making utterance.

(1) First and foremost, Aristotle never addresses 'is' as something connecting a subject with a predicate, nor is this verb ever brought up under a special label like σύνδεσμος or δεσμός (Latin 'copula')<sup>34</sup>, to mark it off from other verbs. Its special position is indicated (later on) by the label ὑπαρκτικὸν ῥῆμα.

(2) The word 'is' is always said to be *attached to* the combination already formed by an onoma and a rhema, whereas there is never any suggestion that Aristotle takes it *as itself performing* the combination of an onoma and a rhema. It is rather odd to bury one's head in the sand and bluntly disregard the unambiguous clue that whenever there is talk of the function of the emphatic ἔστι, Aristotle uses the *passive* verb προστιθέσθαι ('be added') or its equivalent: *De int.*, 1, 16a15; 16a18; 4, 16b30; 5, 17a12; 10, 19b19-20 (προσκατηγορηθῇ); 19b25; 19b30; 19b38; 20a5 (προσῆπτετο); 20a9; 20a14-15; 20a36; 11,

<sup>34</sup> The term σύνδεσμος is sometimes used by commentators *after* Ammonius to indicate copulative ἐστίν. Unlike the verb 'copulare', which is found from Boethius onwards, the Latin noun 'copula' did not appear until around 1100; De Rijk (1986), 114, n. 4; (1987), 60f. In an interesting paper ("Grammar on Aristotle's Terms", in M. Frede & G. Striker, *Rationality in Greek Thought*, Oxford 1996) Barnes too has drawn our attention to the striking fact that even as late as Ammonius (about 500 A.D.) there was no special word for 'copula'. As usual, this striking fact remained ineffective.

21a21; 12, 21b6; 21b21; cp. 21b27-30; *APr.* I 1, 24b17; *Phys.* I 2, 185b30 (προσάπτοντες), never the *active* verb συντιθέναι ('combine').<sup>35</sup>

(3) Another clue is the emphatic position of ἔστι in Aristotle's examples. In common Greek the orthotone ἔστιν put at the head of the sentence emphasizes the affirmation; e.g. ἔστι Σωκράτης σοφός, i.e. 'Socrates is truly (really) wise'.<sup>36</sup> Obviously Aristotle adapts this idiom for the sake of his deep structure analysis of the basic affirmation, also extending it to negations (οὐκ ἔστιν; e.g. *Int.* 10, 19b30). Incidentally, the emphatic position of ἔστιν at the head of the sentence in all the examples used by Aristotle (those outside *Int.* as well), which from the grammatical point of view is conspicuous enough, did not receive due attention so far.<sup>37</sup>

<sup>35</sup> David Hitchcock was the first to make the important observation that the prefix 'προς-' is always used (*apud* Matthen 1983, 123). In his extensive discussion of the composition of the statement-making utterance, Maier well observed (I, 111ff.) that Aristotle speaks of the πρόσθεσις of 'is', but he kept talking of 'copula'. For that matter, it is needless to say that Maier's account of "das Wesen des Urteils" is basically vitiated by his general misconception of what logic is all about, including his talk (II, 9ff.) about "das Wesen des Syllogismus".

<sup>36</sup> Kahn (1973), 332; Ruijgh (1979), 55.; Nuchelmans (1973), 29. In K.J. Dover, *Greek Word Order* (Cambridge 1960), where (32-4) emphasis as a logical determinant ("essential to the clarity of argument", 32) is dealt with, there is no mention at all of Plato's or Aristotle's use of emphatic ἔστιν. In the wake of Medieval logicians, Peter Abelard (1079-1142) in particular, Gottfried Hermann distinguished (*De emendanda ratione graecae grammaticae*, Leipzig 1801) two significations of ἔστιν, one in which it simply performs the function of the copula and requires the addition of a predicate, and the other in which it contains the predicate within itself, and thus designates 'existence'. To Hermann, in the latter case the verb is orthotone (ἔστιν), whereas in the copula use it has the less conspicuous accent on the second syllable (ἐστίν). Kahn has convincingly shown (1973, 420-4) that Hermann's rule is simply false: when an emphatic ἔστιν is orthotone, this is because the emphasis on the verb is connected with its initial or quasi-initial position (as in οὐκ ἔστι and πᾶς ἔστι), i.e. its occurrence at the head of the sentence, or as a frozen sentence (such as the phrase ἔστιν ὅτε = 'sometimes') in another position.

<sup>37</sup> Neither Ackrill (1963, *passim*; cf. 119-21) nor Cavini (1982, 17-45, esp. 12-22) pay any attention to this feature; Cavini explicitly calls (12) the emphatic ἔστιν in ἔστιν λευκὸς ἄνθρωπος copulative, and tacitly changes (17) its emphatic position in writing ἄνθρωπος δίκαιος ἔστιν. Weidemann (1994, 330) even criticizes Aristotle's use of a word-order, which, in his view, confuses our understanding of certain oppositions between sentences; cf. *ibid.*, 177; 327ff.; 333f. Kahn is of the opinion (1973, 332) that at *Met.* Δ 7, 1017a31ff., where Aristotle claims that ἔστιν means 'is true', the example ἔστι Σωκράτης μουσικός from the grammatical point of view, is an ordinary instance of the adjectival copula ("Socrates *is* musical, he really is"), and adds "The initial position of the copula has no syntactic significance. Insofar as we speak of Aristotle's example as a veridical use of εἰμί, we are referring only to the lexical nuance of the verb and not to a distinct sentence form". On this interpretation, however, you will make the Aristotelian 'assertion' a somewhat overacting speech act. When he discusses (*Met.* Δ 7, 1017a31) the 'is' and 'is not'

(4) When in the opening chapter of the *APr.* the ‘term’ (ὄρος) is defined (I 1, 24b16-18) as (a) that into which a premiss is analysed, viz. that which is said of (τὸ κατηγορούμενον) and that which it is said of, and (b) the element ‘be’ and ‘not be’ affixed (προστιθεμένου) to this compound, the vulgate reading has προστιθεμένου ἢ διαιρουμένου.<sup>38</sup> Ross rightly claims (*ad loc.*, 290f.) that this reading “betrays its incorrectness at two points: (1) the true opposite of προστιθεμένου, both according to Aristotle’s usage and according to the nature of things, is not διαιρουμένου but ἀφαιρουμένου; even if ἀφαιρουμένου be read,<sup>39</sup> the text would have to be an illogical confusion of two ways of saying the same thing”, viz. “either ‘being’ being added or removed” and “either ‘being’ or ‘not being’ being added”. Aristotle can hardly be credited with so gross a confusion, Ross understandably thinks; nor will it come as a surprise that the Greek commentators have great difficulty in defending the vulgate reading. In addition, in its emended version (by cancelling ἢ διαιρουμένου) the text is completely in line with all those passages where Aristotle takes the ἔστι (or οὐκ ἔστι) to be attached to the assertible to frame affirmative (or negative) statements, and there οὐκ ἔστι is never said to separate a subject from a predicate, as is the case in the ‘S is not P’ construct. It is noticeable that Ross (290) recognized that the idea of ‘is’ and ‘is not’ being *attached* to a dictum is “both according to Aristotle’s usage and according to the nature of things”.<sup>40</sup>

(5) Even when speaking at *Phys.* I 2, 185b25-32 about people<sup>41</sup> violating language in such a way as to substitute for ‘the man is pale’ the

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emphatically placed at the head of the sentence, Kirwan (1971, 146) regards this as just a muddling oddity of Aristotle’s: “Whatever the explanation of this oddity, its effect is to destroy the value of the examples as illustrations of a separate sense of ‘is’. For the fact that ‘x is F’ means the same as ‘it is true that x is F’, and ‘x is not F’ as ‘it is false that x is F’, can have no tendency to show that ‘is’ can mean the same as ‘is true’, or ‘is not’ as ‘is false’”. In point of fact, Aristotle does not intend to show anything, he merely defines his (protocol) usage, as modern logicians do in stipulating that ‘Tom is tall’ equates ‘It is true that Tom is tall’. Note that in his comments on *Met.* Δ 7, 1017a31-35 Ross (I, 308) pays due attention to the emphatic position of ἔστιν in terms of its assertoric use; my section II 8.52 in Vol.

<sup>38</sup> Accordingly, the *Aristoteles latinus* reads “vel apposito *vel* *diviso* esse et (vel) non esse”.

<sup>39</sup> See *Phys.* I 2, 185b27-28.

<sup>40</sup> Łukasiewicz (1951, 14-6) rightly rejects the idea that Aristotelian syllogistics can be taken in terms of a copulative theory of predication.

<sup>41</sup> Presumably, people like Antisthenes, the Megarians, and the Eretrians, united in their attempt to dispense with ἔστί for uses other than identity statements, are intended; Ross (*ad loc.*, 469). For Antisthenes see also *Met.* Δ 29, 1024b26-36 and H 3, 1043b28-32; De Rijk (1986), 115-7.

phrase ‘the man has paled’ (λελεύκωται), and reject phrases like ‘is walking’ as a paraphrase of the finite verb (‘walks’), Aristotle presents their motive in terms of his own analysis of the statement-making utterance: “For fear of making what is one appear many *by affixing* (προσάπτοντες) the word ‘is’, because, in their opinion (ὡς), ‘one’ and ‘being’ are always used in one and the same sense”. No doubt, the view he was criticizing would have been more clearly displayed in (post-Aristotelian) terms as a mistaken equation of the copulative ‘is’ with the identative ‘is’.

(6) In the Lexicon, *Met.* Δ 7, 1017a31-35, where it is claimed that ‘be’ and ‘is’ signify that something is the case, and ‘not be’ that it is not the case, what is said to be the case or not to be the case must be an assertible (modern ‘dictum’ or ‘that-clause’ expressing a *πρᾶγμα*). Now this assertible may be affirmative (‘Socrates’s being educated’) or negative (‘Socrates’s not being educated’), but the aforesaid ‘be’ and ‘not be’ are affixed equally to an affirmative or a negative assertible. Evidently, the case of ‘not be’ involves a denial performed by the negative operator ‘is not’ *affixed to* the operand, regardless of whether this itself contains an indefinite rhema.

(7) Aristotle’s analysis of the statement-making utterance also comes clearly to the fore in *Int.* 12, 21b19-32. There the assertoric operator ἔστι (οὐκ ἔστι) is said to produce an affirmative (negative) statement by being *added to* an assertible like ‘a (the) white man’s being’, and so to determine the actuality (τὸ ἀληθές) of the things conveyed by the assertible.

(8) At *An.* III 6, 430b1-4 it is explicitly claimed that falsehood always implies a σύνθεσις:<sup>42</sup> “for even if one calls the pale ‘not-pale’, then the pale and the not-pale<sup>43</sup> are taken as combined;<sup>44</sup> [...] in each and every case, that which unites is the mind”. Some more evidence for σύνθεσις comprising the case of denial as well as that of assertion is provided by *Met.* Δ 29, 1024b18-19.<sup>45</sup>

So much for the direct evidence in support of the monadic structure of Aristotle’s statement-making utterance. In addition, the

<sup>42</sup> These compounds are assertibles, not assertions, and, accordingly, not either true or false by themselves, but merely susceptible of a truth-value, as will be argued for in my section 2.2.

<sup>43</sup> Reading (De Rijk 1987, 59, n. 55) καὶ γὰρ ἂν τὸ λευκὸν μὴ λευκὸν <φῆ, τὸ λευκὸν καὶ [with codex Vaticanus 256] τὸ μὴ λευκὸν συνέθηκεν.

<sup>44</sup> The Greek text continues with loosely saying (430b3-4) that it is also possible to call all this a διαίρεσις.

<sup>45</sup> In Cavini (1982, 17-45) the *De anima* passage is conspicuously ignored.



alternative view endorsed in the present study can silence most of the critics of Aristotle's sayings, who are led by their anachronistic 'S is P' analysis. Here are some examples of such circumstantial evidence.

(9) Aristotle is sometimes accused of indiscriminately using the label ὑποκείμενον both ontologically to stand for a substrate and for the logical subject of an 'S is P' construct. A happy consequence of the alternative view is that the term ὑποκείμενον can always be taken in its ontological sense,<sup>46</sup> to indicate the substratum (referred to by a name or name-like expression), rather than as the grammatical subject, as the 'S is P' construal would suggest.<sup>47</sup>

(10) On the alternative interpretation of the anatomy of the Aristotelian statement-making expression, Ackrill's<sup>48</sup> claim that Aristotle fails to distinguish between the predicative and the assertive functions of the rhema (as used in a statement) is no longer to the point, for a similar reason; see my previous analysis of the statement-making expression, and my next section.

(11) The problems raised by Ackrill and Weidemann<sup>49</sup> concerning Aristotle's (putative) use of the indefinite rhema in statements will disappear as soon as the 'S is P' construal has been abandoned.

(12) Aristotle is commonly criticized for failing to distinguish between the 'copulative', 'identative' and 'existential' uses of 'be'<sup>50</sup>. This distinction, however, turns out to be anachronistic, because Aristotle's assertoric operator ἔστι, meaning 'Is: [S, f]',<sup>51</sup> in its strong hyparctic sense is prior to any such differentiations of 'be'.

(13) The severe criticism made of Ancient metaphysics ('onto-logy') by philosophers of the Mill-Russell-Carnap tradition to the effect that the great diversity of meanings and functions of the verb εἶναι and its cognates was bound to seduce the Ancients into becoming involved

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<sup>46</sup> My section 2.18.

<sup>47</sup> The grammarian Apollonius Dyscolus (2nd cent. A.D.) still uses the term in the original Aristotelian sense of 'substrate'; see Seuren (1998), 122, who rightly refers to Ammonius (CAG IV-5, p. 721-8<sup>19</sup>) and Boethius (*In Periherm.* Ia, p. 77<sup>5-15</sup>) for the word's use as a grammatical subject term. Cf. my section 2.17.

<sup>48</sup> Ackrill (1963), 119; 150f.

<sup>49</sup> Ackrill (1963), 120f.; Weidemann (1994), 177.

<sup>50</sup> Ackrill (1963), 119; 123; also Weidemann (1994), 174; 190, not to mention modern philosophers like e.g. John Stuart Mill, Russell, and Geach.

<sup>51</sup> I use here the common formula '[S, f]' to stand for '[the substratum having the attribute f]', in which for the most part the substratum is indicated by an onoma or name-like expression, and the attribute by a single rhema or a complex rhema or definiens (λόγος). For my own notation see my sections 2.12-2.13; 3.73-3.75.

in “frivolous speculations concerning the nature of Being” (Mill) makes no sense at all as far as Aristotle is concerned, considering his view of the uniform notion ‘be’ (\*‘es-’) in the statement-making expression.<sup>52</sup>

(14) With reference to what was pointed out in my items (12) and (13) it is pertinent to notice that the verb εἶναι is always indicated by the grammarians as ὑπαρκτικὸν ῥῆμα, i.e. the verb signifying existence. This is an incontestable plea against its copulative use (unless you were to assume that Greek is unable to frame blackboard sentences). Remarkably, Medieval grammarians and logicians too continued speaking (in the wake of Priscian) of ‘est’ as ‘verbum substantivum’, even in cases in which it is merely used copulatively, like in ‘chimera est non-existens’.<sup>53</sup>

(15) Kirwan believes that Aristotle’s argument at *Met.* Γ 4, 1007a20-b18 directed against the opponents of the Law of non-contradiction (LNC) is vulnerable, because it “relies on a dubious theory of predication”, in which the distinction between what is called ‘essential and coincidental predications’ seems to confuse the notion of ‘statements of identity’”. In a similar vein, Owen speaks (1986, 208ff.) of a confusion which is due to “the Platonism of Aristotle”. However, the confusion is all on the part of the interpreters, who fail to understand Aristotle according to his own theory of ‘predication’.

(16) A peculiar feature of the monadic interpretation of the Aristotelian statement-making utterance is the prominent contradistinction between assertible and fully-fledged assertion. Observing this distinction can also stop us from finding seeming weaknesses in Aristotle’s exposition of logical matters. For examples see my next section, items (1) to (13).

(17) In his chapter on the rather complicated (modern) distinction between syntactical, semantico- ontological, and judgmental (or conceptual) notions of subject and predicate, Kahn (43) briefly mentions the traditional interpretation of ‘P is predicated of S’, in which the concept of predication is considered an ontological relation where

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<sup>52</sup> The same goes for Plato; De Rijk (1986), 313-6. The Presocratics, too, based their (divergent) views of ‘the things there are’ upon one focal meaning of εἶναι, and were not led astray by such anachronistic grammatical distinctions either. Cf. e.g. Parmenides of Elea in De Rijk (1983), 48-51.

<sup>53</sup> Bäck refers (2000), I to Thomas Hobbes’s (1588-1679) opinion that the copula is a sign which unites the predicate to the subject; the idea that the copula ‘est’ as well as this expresses ‘existentia’ is mere mysticism. On this view, the label ‘substantive verb’ is a real misnomer.

neither term is a linguistic expression, namely the relation that holds between a person or object or other entity (shortly 'the topic') and 'what is said of it' ('comment'), where the thing said is not an expression but a property, action, or state. As is often done, Kahn too assigns (*ibid.*, n. 8) the traditional view to Aristotle, but claims that it is more complicated than might at first appear, since we must distinguish (a) the ontological relation as such, i.e. the complex subject-attribute fact or state of affairs corresponding to a true sentence of the form 'S is P'; and (b) the assertion or claim that such a relation holds, as made by a speaker (or by a statement-form 'S is P'), without prejudice as to whether this claim is true or false. Kahn rightly points out that syllogisms, namely in *APr.*, present cases of (b), in which the truth value of the premiss is left indeterminate, while on other occasions, e.g. in *Cal.*, 'is said of' is used in the sense of 'is truly said of'. However, any idea of a complicated matter on this score easily disappears once we have abandoned the 'S is P' construal as representative of Aristotelian statement-making, and instead observe the distinction which is pivotal in our alternative analysis, viz. between an assertible and an assertion, of which the former as such lacks a truth claim, while the latter by definition includes one.

(18) The distinction between 'assertible' and 'assertion', which is so pivotal in some discussions in Aristotle, for instance in *Int.* 9, can only be gauged in the copula-less exegesis of the Aristotelian statement-making utterance; see my next section.

## 2. 16 *The import of the distinction between 'assertible' and 'assertion'*

As we saw before, the assertion (or statement) taken as a whole consists of the assertoric operator ἔστιν and the monadic assertible which acts as its operandum or argument. This constitution of the statement-making utterance is a pivotal ingredient of Aristotelian semantics, since Aristotle frequently opposes the assertion's semantic-syntactical behaviour to the semantic position of the assertible by itself, i.e. taken as an unapplied assertible. In point of fact, the Aristotelian contradistinction of assertion and assertible has everything to do with the modern opposition between 'sentence' and 'assertion', but is substantially different in that it opposes 'assertion' not to 'sentence' as a whole but to its assertible. Therefore on Aristotle's understanding of the role of the assertible, the fact that the four distinct types of utterance, 'assertive', 'interrogative', 'optative', and 'imperative' (cf. *Int.* 4, 17a1-6) all concern one and the same

assertible<sup>54</sup> more clearly comes to the fore than in the copulative 'S is P' construal, where the sameness of the operand of the distinct operators is hidden in the indicative frame of the sentence.

Below I will list the most conspicuous cases in which the contra-distinction 'assertion'-'assertible' plays a pivotal role in Aristotle's strategy of argument, or putting it differently, the opposition of the significate expressed by the assertible considered at the *ὀνομάζειν* level to the significate as applied at the *περσίνειν* level.<sup>55</sup>

(1) Peter Geach's verdict (1972, 44-51) on the basic deficiencies of Aristotle's statement-making utterance is entirely based on his manifold misconceptions of what Aristotle claims, and intends to say in *Int.*; in particular Geach failed to recognize the inadequacy of the traditional 'S is P' construal to represent Aristotle's position.

(2) On Aristotle's analysis of the statement-making utterance, our problem concerning the ambiguity of expressions like 'John is tall', which is indiscriminately used to stand for the assertion that John is tall and the blackboard sentence as well, which semantically equals the mere dictum 'that-John-is-tall' without asserting it, does not exist, owing to the fact that on Aristotle's interpretation, the difference between assertible and assertion is unmistakable.<sup>56</sup>

(3) The amazing thesis held by Whitaker (1996, 80-2) that Aristotle did not have the idea of a denial ranging over the sentence as a whole (our 'assertion'), but only knew of what is called 'internal negation' likewise depends upon Whitaker's taking the copula construction as substantial to Aristotelian sentencehood. In point of fact, the idea of a denial ranging over the sentence as a whole is quite familiar to Aristotle, being the negation of the assertoric operator which ranges over the assertible (whether or not itself negated 'internally').

(4) The erroneous view that Aristotle's concept of 'contradiction' should differ from ours is entirely based upon disregarding the vital

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<sup>54</sup> My section 2.13.

<sup>55</sup> My section 2.2.

<sup>56</sup> It is pertinent to realize that from the semantic point of view, our blackboard sentences are not real statements, properly speaking, but mere dictums or 'propositions' in the modern sense which are (grammatically) disguised as statements. It is precisely because of Aristotle's clear-cut distinction between 'assertible' and 'assertion' that Ackrill (1963, 90f.; 125) is wrong in criticizing Aristotle that he fails to tell the difference between sentences and statements (e.g. between 'Callias is sitting' taken as a 'type' and as a 'token'). The same holds for Weidemann's reproach (1994, 191) that Aristotle does not distinguish between the different kinds of 'Sätze'. Cf. my section 3.41.

distinction he makes between ‘assertion’ and ‘assertible’; my section 3.54.

(5) The same goes for Whitaker’s thesis (1996, 3 and 79ff.) that Aristotle admits three exceptions to what Whitaker has baptized the “Rule of Contradictory Pairs” (RCP); our section 3.54.

(6) It is only by taking the dichotomy ‘assertion-assertible’ seriously that Aristotle’s solution to the problem of contingent future events in *Int.* ch. 9 can be correctly evaluated; my sections 3.66-3.67 and 3.69.

(7) The intricacies found in *Int.* ch. 10 concerning the divergent ways in which the negative operator may affect the components of the assertible can only be disentangled by taking into account Aristotle’s copula-less analysis of the statement into assertible and assertoric operator; my section 3.75.

(8) Likewise the view that at *Int.* 10, 20a39-40 Aristotle seems to recognize the so-called ‘Proclus’s canon’ (concerning the equivalence of an assertion without existential import and its counterpart conveying it) is based upon the common misconception that this text should present an opposition between two assertions instead of two assertibles; my section 3.77.

(9) To recognize the impact of the ‘assertion-assertible’ distinction is also of much help towards understanding Aristotle’s at first glance rather trivial remarks about changing the word-order in a statement; my section 3.78.

(10) The question whether in his conception of ἀρχαί as found in the *APo.* (esp. in II, 19) Aristotle is vacillating between the ideas of ‘primitive theorems’ and ‘primitive terms’ (‘Are they propositional or conceptual?’) has everything to do with erroneously putting assertible and assertion on a par. Once ‘propositional’ is understood in terms of the ὀνομάζειν level,<sup>57</sup> i.e. with reference to assertibles, not assertions, this hotly debated issue reduces to the simple question (which is quite harmless indeed): ‘Are the ἀρχαί concerned with complete or incomplete (unapplied) assertibles?’; my section 6.84.

(11) The baffling view that Aristotle’s doctrine of genuine knowledge and apodeictic deduction should betray a lack of interest in particulars on his part is entirely due to the usual mistaking of naming and appellation (‘conceptualization’) for sentence predication. This misconception is a sequel to the one with respect to Aristotle’s analysis of the statement-making utterance; my section 6.87.

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<sup>57</sup> The distinction between the ὀνομάζειν or onomastic and περσίνειν or apophantic levels will be dealt with in my section 2.2.

(12) It is commonly ignored by the commentators that Aristotle's confutation of the opponents of the Law of Non-contradiction (LNC) in *Met.* Γ 3, 1005b8–6, 1011b12 basically rests upon his subtly applying the distinction between 'assertion' and 'assertible' which is implied in his deep structure analysis of the statement-making utterance; my section 7.84 in Vol. II.

(13) Aristotle's discussion (in *Met.* Z 12, 1037b14–26) of the combination 'man *plus* pale(ness)' in cases in which they form a unity is best explained if we assume that, in Aristotle's perception, sentences such as 'The man is pale' is to be understood as equivalent to 'The pale-man *is*', as is observed by Matthen (1983, 124); my section 2.12.

## 2. 17 Allan Bäck's 'aspect theory' of predication

In his thorough book on Aristotle's theory of predication, Allan Bäck proposes<sup>58</sup> to look at Aristotle's views on predication in terms of a theory of aspects. On this theory, a standard subject-predicate sentence (one of *de tertio adiacenti*) of the form, 'S is P', is to be read as 'S is existent as a P'. For instance, 'Socrates is (a) man (or just)' is to be read as 'Socrates is existent as a man (as just)'. On such a reading, even a seemingly simple predication will have compound truth conditions; e.g. the truth of 'Socrates is existent as a man' will require both that Socrates should be existent and that he should be a man. In the aspect theory of predication, the predicate is supposed to stipulate a certain aspect of existence of the subject.<sup>59</sup> In the notation of the aspect theory, Bäck (11) claims, "the copula, 'is', asserts the claim of existence, while the predicate 'P', if there be a further predicate, gives further information as to how S exists, namely, as a P". In sentences with an adjectival verb, where the copula is not stated explicitly, like in 'S P-es', the theory claims that it is nevertheless implicitly present, so that it should be read 'S is (existent) as a P', and treated accordingly (*ibid.*). Thus the aspect theory suggests a uniform, existential reading of 'is'.

Bäck claims that this theory, although never explicitly defended by Aristotle, is a theory about how *we* should read Aristotle's Greek,<sup>60</sup>

<sup>58</sup> Bäck (2000), *Introd.*, XIII.

<sup>59</sup> *Ibid.*, 2f.; 11; 264f. Bäck (in *Journal of the History of Philosophy*, 1987) earlier argued for this theory as held by Islamic philosophers, notably Avicenna, in their commentaries on Aristotelian logic. See also Bäck (2000), 1; 3f.; 19–21.

<sup>60</sup> And indeed that of some of his precursors as well (Parmenides and Plato), 31–58.

especially his logical remarks on predication (11; 14), remarks which “themselves constitute a theory on how to understand the logical significance of sentences”. Bäck is of the opinion (1f.; 57; 70; 73; 81f.; 96-8; 107-9; 260; 263) that the aspect theory is in fact followed by Aristotle, that is to say, his use of language and his theoretical remarks about language agree with, or can be modelled by it (15). It is to be taken not merely to indicate the logical structure of a sentence but also to present the very meaning of the sentence to us. This means that this reading gives a more accurate and perspicacious parsing of an Aristotelian sentence to our modern ears than the original text. The aspect theory, Bäck holds, concerns more what Aristotle thinks about predications than what ordinary language users intend to mean by making predicative statements.

Bäck is fully aware that in Aristotle we can find no explicit theoretical defense of the aspect theory. However, he is of the opinion that it represents the best way to grasp what Aristotelian predication comes to, and that it can solve many puzzles about Aristotle’s philosophy, and yields a new unity to his logic and metaphysics (265-71).

There are some important details in Bäck’s view of Aristotle’s statement-making that I can fully agree with. *Contra* Kahn, he argues (22-9) for the view that the fundamental meaning of ‘be’ in its various forms for ordinary speakers in ancient Greek (and in Indo-European languages in general) may well be one of *existence*, as also many linguists take the existential use to be the fundamental one in Indo-European (my section 1.52). Consequently, he rejects the ‘copulative theory’<sup>61</sup> as representative of Aristotelian statement-making.<sup>62</sup> He also has a clear view of Aristotle’s use of what is termed

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<sup>61</sup> “On the copulative interpretation [of Aristotle’s logical views De R.], the copula ‘is’ changes its logical function depending on its sentential context. In a statement of *secundum adiacens*, it makes an existence claim: ‘is’ in ‘S is’ means that S is existent, and connects the existence claim to the subject. In a statement of *tertium adiacens*, ‘is’ connects the predicate term to the subject without making any additional claim of existence. [...]. Most versions of the copulative theory assume existential import for statements of *tertium adiacens*.” (Bäck, 265f.).

<sup>62</sup> “The copulative theory has ‘is’ fulfilling one main function in a statement of *tertium adiacens*, to couple subject and predicate. It is hard to see why two merely coupling relations are to be distinguished so as to give existential import for, e.g., ‘the dog is red’ but not for ‘the goat-stag is red’. Making existential import come from the content of the terms would make logical rules of inference have much more complex form than Aristotle gives or we want” (Bäck, 267). Bäck (268) also criticizes the copulative theory for regarding ‘*secundum adiacens*’ and *tertium adiacens*’ statements for radically different logical types, which does not fit Aristotle’s practice, he thinks.

his 'protocol language' aiming at clarifying the proper meanings of basic linguistic expressions; in fact, Bäck's reconstruction of what he regards as the Aristotelian theory of predication is a protocol language, too.<sup>63</sup>

However, Bäck's arguments in support of his claim that the aspect theory is in effect Aristotle's are far from convincing. Firstly, as Bäck himself concedes (*Introd.*, XV; cf. 271) even if the aspect theory of predication can solve certain puzzles of Aristotle's philosophy, it still does not follow that it was Aristotle's. It is surely nowhere explicitly stated in the *Corpus*. It is true, Avicenna (Ibn Sina) and some other Arabic authors seem to interpret Aristotle along the lines of the aspect theory (3; 19-21; 291-3), but this can readily be ascribed to the idiosyncrasy of the Arab language, and its verb 'be' in particular.<sup>64</sup> Further, more importantly, Bäck is entirely wrong (*Introd.*, XV) that "clear texts surely are lacking, indeed, for this *as for any other* (italics mine) interpretation of Aristotle's views on predication". Remarkably enough, although Bäck clearly sees the inadequacies of any 'copulative theory' with reference to Aristotle, he fails to observe the textual evidence against the copulative theory (and any other dyadic theory of statement-making, for that matter) as presented in our section 2.15. In point of fact, Bäck's rejection of the copulative theory is not radical enough: he should have eliminated any idea of a copula construct as such, but he keeps talking of ἐστὶ as a 'copula' and even ascribes (124-30) a copulative function to the verb ὑπάρχειν. He also (114ff.) defends the tripartite analysis of premisses as the standard ones used by Aristotle in syllogistic, however inconsistent this may appear.<sup>65</sup> Finally, the puzzles that on the copulative theory appear in Aristotle do not require our adoption of the aspect theory to get rid

<sup>63</sup> See also the *Index* in Bäck (2000) s.v. 'Protocol language, Aristotle's'.

<sup>64</sup> See W. Wright, *A Grammar of the Arabic Language* (Cambridge 1964) II, 258, referred to by Bäck (20).

<sup>65</sup> Bäck (116): "So Aristotle seems to have two incompatible analyses of the statement: the bipartite, consisting of a name and a verb consignifying time; a tripartite, consisting of two atemporal names connected by a temporal copula. Indeed, Aristotle seems to have many problems here". (Bäck refers to the "fair selection of them" in Ackrill (1963), 118-20). To Bäck (117), "Aristotle seems to think that he has a single, consistent theory", although he "switches back and forth between the two [the analysis in terms of the aspect theory, and the one described by the copulative theory; De R.; see *ibid.*] freely" (117). See however *ibid.*, 119: "To talk of 'copula' here is misleading: for on the tripartite analysis too, every statement is a statement of existence or being, where that being is signified by 'is' and where that being may be qualified further by the predicate, which functions, as it were, adverbially".



of them: a monadic theory which eradicates any idea of a 'copula' will do.<sup>66</sup>

## 2. 18 *The notion of ὑποκείσθαι in Aristotle*

In his presentation<sup>67</sup> of the three main uses of ὑποκείσθαι, Bonitz (*Index*, 798a24-9) draws within its third use another threefold distinction, marking off the use of ὑποκείμενον to stand for (a) a thing's matter determined by its form (εἶδος), (b) οὐσία which properties inhere in, and (c) the logical subject which predicates are assigned to. It must strike the reader that Bonitz (798a31-3) immediately qualifies the distinction between (b) and (c) because of the strong coherence between εἶναι (ὑπάρχειν) and λέγεσθαι (κατηγορεῖσθαι), to the effect that not in all occurrences can these uses be sharply distinguished.<sup>68</sup>

Ackrill (1963, 75f.) rightly rejects the common view that the 'said of' and 'said in' devices used in *Cat.* 2, 1a20ff. should introduce notions of radically different types, as if the former were linguistic or grammatical, the latter metaphysical or ontological, and that, correspondingly, the word translated 'subject' (literally, 'what underlies') means 'grammatical subject' in the phrase 'said of a subject' and 'substance' or 'substrate' in 'in a subject'. He is also perfectly right in claiming that it is not linguistic items but the things they signify that are 'said of' in the sense in which this expression is used in *Cat.* 2. But when he says (76) that ὑποκείμενον "means neither 'grammatical subject'; nor 'substance', but is a mere label for whatever has anything 'said of' it or 'in' it", his rejection of the rendering 'substrate' in the phrase ἐν ὑποκειμένῳ seems somewhat rash. In point of fact, that which anything is 'said of' is that attribute's 'substrate'.

I think Ackrill's rejection of the renderings 'logical subject' as opposed to 'substance' can better be credited by admitting the ren-

<sup>66</sup> The clear examples Bäck (264-71) gives of puzzles solved by the aspect theory are *a fortiori* unravelled by any monadic theory. In addition, I cannot see how the aspect theory can explain unmistakable features of Aristotle's logic, such as his sharply opposing assertibles to assertions, or the fact that Aristotle apparently has no need to mark off assertions from 'blackboard sentences'.

<sup>67</sup> *Index*, 797b23-798a29: (1) local sense, (2) argumentative sense (positum esse "tamquam fundamentum ex quo alia concludantur"), (3) positum esse "tamquam fundamentum cui alia inhaereant". For ὑποκείσθαι see also my section 4.23.

<sup>68</sup> The examples of the supposed logico-grammatical use in Bonitz, *Index* p. 798b32ff. are illustrative of this fact. Incidentally, the 'local sense' includes the broader notion of 'being given', whether physically or mentally, as a result of which τὰ ὑποκείμενα often comes close to τὰ ὑπάρχοντα; Tugendhat (1982), 14f., n. 13.

dering 'substrate', and abandoning the whole idea of something being statementally predicated of a logical subject. Bemelmans<sup>69</sup> is right in taking the verb ὑποκεῖσθαι in the third use mentioned in Bonitz (*Index*, 798a11ff.) to always stand for 'to provide for something else the opportunity to be', 'to be something underlying'. Thus in every occurrence, the terms ὑποκεῖσθαι and ὑποκείμενον refer to the ontological relationship between a substrate and its ontic determinant.

It goes without saying that to take 'underlying thing' or 'substrate' as the only meaning of ὑποκείμενον precludes any problem raised in terms of the 'either logical subject *or* ontological subject', by ruling out the whole idea of sentence predication, and reducing the relationship conveyed by the 'said of' device to that between a substrate and its attribute, which together form an ontic unit.<sup>70</sup>

The word ὑποκείμενον also occurs in the phrase τὰ ὑποκείμενα πράγματα, e.g. *Int.* 12, 21b28, where Aristotle (21b10-33), comparing the negation of modal expressions to that of non-modal (*de inesse*) ones, indicates that what is ranged over by the modal operator ('possible', 'admissible', 'necessary' etc.) or the non-modal one (ἔστιν = 'obtains'), respectively, is the matter underlying these operators. Evidently, this underlying matter is an assertible, e.g. 'a (the) man's being' or 'a (the) pale man's being' (21b27-28), which, in accordance with the other occurrences of this word, is called πρᾶγμα.<sup>71</sup>

## 2. 2 Naming vs. asserting. Onomastic vs. apophantic level

In the *Sophist*, Plato makes every effort (261D1-262C6) to make Theaetetus see the important difference between just 'calling up' something (ὀνομάζειν) and making a statement that something is the case (λέγειν).<sup>72</sup> What is 'called up' is just an object (signified by a

<sup>69</sup> Bemelmans (1995), 122-33; 161, nn. 4-16.

<sup>70</sup> Likewise in Plato; see De Rijk (1986), 194-6. As we saw before in our discussion of the τὶ κατὰ τινός device (section 2.11), this unit is to be taken as a non-quidditative whole, consisting of a substrate *plus* a determinant taken from another category. — The exclusively semantic sense of ὑποκείμενον as defended here will better suit Leszl's view of the basic function of what he (1975, 59) calls the 'subject-predicate logic' which is matched by a 'substance-property ontology' than the usual view of sentence predication and the twofold sense of ὑποκείμενον.

<sup>71</sup> My sections 2.22; 3.51; 8.43. Other uses of 'underlying pragma' are found at *Cat.* 10, 12b15 and *Met.* K 11, 1067b18. I cannot see why Nuchelmans (36) regards the use of 'underlying pragma' as quite different from the other ones.

<sup>72</sup> Nuchelmans (1973), 13-7; De Rijk (1986), 196-202; (1987), 28f.

single name or name-like expression), or an object involved in a certain state or action (signified by an aggregate of names and attributes), but always without any indication of whether the speaker claims that what is signified is really the case or not. But if the expressions are used on the λέγειν level this claim is explicitly made.

This is all clear enough. But Plato's use of the verb λέγειν could put us on the wrong track, because of its etymological relation with λόγος. In point of fact, the objective content of λέγειν is what Plato labels λόγος εἰρημένος and Aristotle defines as λόγος ἀποφαντικός ('apophantic account'),<sup>73</sup> not any λόγος whatsoever. Therefore in this context<sup>74</sup> the verb λέγειν is used by Plato in a sense stricter than λόγος commonly has, indiscriminately meaning both our (unapplied) 'assertible', which is merely susceptible of a truth-value, and a fully-fledged assertion, including a truth claim. This makes an unqualified use of the label 'λέγειν level' less appropriate. Therefore it seems preferable to use the unequivocal verb περαινέιν, which Plato uses in this context in the sense of 'to make one's point'.<sup>75</sup>

To use an expression just to bring up a 'thing' can be called using it on the ὀνομάζειν or onomastic level, while expressions used on the περαινέιν or apophantic level have existential import.

## 2. 21 Φάναι and φάσις. Κατάφασις and ἀπόφασις. Ἀντίφασις

The verb φάναι is used in common Greek to stand for (1) 'to think', (1a) in the sense of 'to be of the opinion' (of which the content is by definition a compound assertible, open to be consented to or dissented from), and (1b) sometimes (e.g. *Met.* Θ 10, 1051b24), like νοεῖν, in the sense of just grasping a (single) thing's quiddity. In both senses it is used on the onomastic level, i.e. without including any truth claim. Besides, it is used (2) on the apophantic level, to stand for 'to assert something to be the case'.

The noun φάσις is used in a similar way (1) for 'utterance' (either (1a) a one-word expression, or (1b) a more-than-one-word expression, which may both function as an assertible), as well as (2) for

<sup>73</sup> Plato, *Theaet.* 190A5. Aristotle, *Int.* 4, 17a2-3. See De Rijk (1986), 201f.; 309-16; 347-54, and my section 3.4 in the present work.

<sup>74</sup> Of course, leaving the senses 'to pick out', 'to collect', and 'to count' aside, λέγειν and λόγος are elsewhere used by Plato in a wide range of senses, all centring around the focal meaning 'to use speech'; De Rijk (1986), 226-31.

<sup>75</sup> De Rijk (1986), 201f.; 309-13.

‘assertion’. In the former sense, it may go parallel to *διάνοια* (‘discursive thinking’, without as yet being engaged in any ‘yes’ or ‘no’).

Along these lines the uses of our terms divide into  
*φάναι*<sub>1</sub>: E.g. *Met.* Θ 10, 1051b24, where (ontological) truth is defined as a mental contact and ‘grasp’ (*θιγεῖν καὶ φάναι*), which corresponds to

*φάσις*<sub>1</sub>: E.g. *Int.* 4, 16b27; 5, 17a17; 12, 21b19 and 22a11, all of them our [1b], *Met.* Θ 10, 1051b24-25, an instance of our [1a].

*φάναι*<sub>2</sub>: The sense of ‘to say something to be the case’ is found in *Int.* passim; e.g. 9, 18a36ff.; 12, 21b20, not to mention the numerous occurrences in Aristotle’s other works, and in common Greek as well. In this sense the verb is an equivalent of *καταφάναι* (‘to affirm’), and opposed to *ἀποφάναι* (‘to negate’ or ‘to deny’); e.g. *Int.* 9, 18b2ff.; 12, 21b20; 22b12; *APo.* I 4, 73b23; I 11, 77a10; *SE* 171b3; it corresponds to

*φάσις*<sub>2</sub>: The sense of saying ‘yes’ or giving one’s assent is found at *EN* VI 9, 1142b13, where by contrasting it with *διάνοια* Aristotle implicitly describes ‘opinion’ (*δόξα*) as a form of assent, or at least making one’s choice in the affirmative or the negative.<sup>76</sup> In *Int.* 12, 21b21-22 (*φάσεις καὶ ἀποφάσεις*), *φάσις* is evidently used in the sense of *κατάφασις*, as is obviously also the case at *An.* III 8, 432a11.<sup>77</sup>

The aforesaid ambivalences concerning the *ὀνομάζειν* and *περαίνειν* levels return in the uses of *κατάφασις* and *ἀπόφασις*, into which both *φάσις*<sub>1</sub> and *φάσις*<sub>2</sub> are subdivided:

*κατάφασις*<sub>1</sub>: ‘affirmative expression’ (including what is signified by it), which is assignable to something, as opposed to

*ἀπόφασις*<sub>1</sub>: ‘negative expression’ assignable to something.<sup>78</sup> E.g. *Cat.* 10, 12b5-16, where that which underlies an affirmation or negation, viz. a *κατάφασις*<sub>1</sub> or an *ἀπόφασις*<sub>1</sub>, is said not to be itself an affirmation or negation, (i.e. a *κατάφασις*<sub>2</sub> or an *ἀπόφασις*<sub>2</sub>). It is claimed that *κατάφασις*<sub>1</sub> and *ἀπόφασις*<sub>1</sub> — which are instanced by the assertibles ‘that someone is seated’ and ‘that someone is-not seated’, respectively — are opposed to one another in the same way as

<sup>76</sup> Nuchelmans seems to be right in assuming (1973, 19; 24) that Aristotle here alludes to Plato’s description of the soul’s ‘inner dialogue’ in *Theaet.* 189E4-190A6, and to *Soph.* 263E3-14; De Rijk (1986), 295f.; 338f. At *Sophist* 263E12 (*φάσιν τε καὶ ἀπόφασιν*), *φάσις* is used in the sense of *κατάφασις*.

<sup>77</sup> Other places in Bonitz, *Index*, p. 813a18-24.

<sup>78</sup> Nuchelmans rightly refers to this use of the terms in his discussion (1973, 35f.) of the proper meaning of *πράγμα*.

κατάφασις<sub>2</sub> and ἀπόφασις<sub>2</sub>. At 12b15 the underlying assertible is called a 'state of affairs' (πρᾶγμα).<sup>79</sup>

Both κατάφασις<sub>1</sub> and ἀπόφασις<sub>1</sub>, as well as their counterparts, κατάφασις<sub>2</sub> and ἀπόφασις<sub>2</sub> can be coordinated in an ἀντίφασις ('contradiction' or rather 'pair of contradictories'), which at *Int.* 6, 17a33-34 is defined as 'an affirmation *plus* a negation which are opposite'. That there is in fact talk of both ἀντίφασις<sub>1</sub> and ἀντίφασις<sub>2</sub> in Aristotle,<sup>80</sup> appears from many occurrences,<sup>81</sup> including Aristotle's use of the phrase μέριον τῆς ἀντιφάσεως ('member of a contradictory pair'), in which either interpretation is admissible.<sup>82</sup>

Κατάφασις<sub>2</sub> and ἀπόφασις<sub>2</sub> are also called (e.g. *Cat.* 10, 12b6-8) λόγος καταφατικός and λόγος ἀποφατικός, respectively, being the two subdivisions of λόγος ἀποφαντικός ('statement-making utterance'). Alongside this λόγος used on the apophantic level, there is, more frequently indeed, talk of λόγος *tout court*, which functions on the onomastic level, to be labelled λόγος<sub>1</sub> in our notation. The link of λόγος with πρᾶγμα, which is of utmost importance in Aristotle, will be examined in the next section.<sup>83</sup>

Like λόγος in Plato,<sup>84</sup> the Aristotelian λόγος<sub>1</sub> does not equal our 'statement' or 'assertion', but rather 'phrase', 'account', being a compound descriptive expression (or 'definiens'). In the well-known definition of λόγος in *Int.* 4, 16b26-28 the renderings 'account' or 'compound expression' will do perfectly well, even where 'sentence' or 'statement' seem more appropriate. So to take λόγος as 'account' or 'phrase' is required at *Int.* 2, 16a22 (where the phrase καλὸς ἵππος is found), as well as at 2, 16b1; 9, 19a28; 10, 19b19, and at 5, 17a11

<sup>79</sup> Other occurrences are *Int.* 10, 19b7; 12, 21b3-5 (see also Ackrill, 1963, 150 and Weidemann, 1994, 397); *Phys.* V 1, 225a6; *Met.* E 4, 1027b21-22; K 11, 1067b18. At *Top.* III 3, 123b20 ἀπόφασις<sub>2</sub> is opposed to that which functions as its ὑποκείμενον ('underlying' sc. πρᾶγμα). At *An.* III 1, 425a19, ἀπόφασις is used in the sense of a negative state of affairs or 'something's absence': "number is perceived by noting the absence of continuity <in the object of sensation>".

<sup>80</sup> Weidemann (1994), 200.

<sup>81</sup> E.g. *Int.* 7, 17b26; 8, 18a27; 11, 21a22; 12, 21a38-39; and b37; 13, 22a39 and b10-11, 24, 27, 30-32; 14, 23b24-32 and 24b7.

<sup>82</sup> E.g. *Int.* 9, 19a37; 11, 20b23 and 28-29; *Apr.* I 1, 24a23-24; *APo.* I 2, 72a 11-13; *Met.* I 7, 1057a34-35. It will be argued for later on that to Aristotle, the relationship of contradiction is primarily between the contradictory assertibles, and, secondarily, between the contradictory assertions, whose being contradictory depends on the assertibles being contradictory. My sections 3.7-3.8.

<sup>83</sup> See also my section 7.43 in Vol. II.

<sup>84</sup> Λόγος and πρᾶγμα in Plato, as well as Plato's analysis of the statement-making utterance, are extensively discussed in De Rijk (1986), 201f.; 225-31; 306-16; 332-50; 349f.; 353f.; cf. De Rijk (1987), 27-33; for Aristotle, De Rijk (1993), 130-3.

and 11, 21a29, where λόγος is in fact a definiens. Likewise at 9, 19a33 (“since true accounts are true in the same way as their πράγματα (i.e. the states of affairs they signify) are true”) — e.g. the state of affairs signified by ‘that-a-seabattle-will-take-place-to-morrow’ — the rendering ‘account’ is compulsory, and ‘statement’ inadequate. At *Cat.* 5, 4a24-25 and a37, the infinitival phrase τὸ καθῆσθαι τινά (‘that someone is sitting’) is called λόγος.

It is easily seen that the notion of λόγος<sub>1</sub> precisely covers those of κατάφασις<sub>1</sub> and ἀπόφασις<sub>1</sub>. Thus λόγος<sub>1</sub>, when used in a statement-making utterance, is its assertible component, which by attaching an assertoric operator to it turns into a fully-fledged assertion.

## 2. 22 Λόγος and πράγμα

From the time of the early Greek and Latin commentators, the question what precisely the word πᾶγμα stands for has led to different answers. Serious doubts may be raised against the straightforward rendering ‘actual thing’ for πᾶγμα, instead of ‘things *qua* being conceived of in a certain state’.<sup>85</sup>

According to Boethius, Alexander of Aphrodisias already raised the question why — given the claim in *Int.*, ch. 1 that expressions act as names referring to things — Aristotle says that utterances are *primarily* (16a6: πρώτων) signs of thoughts rather than of actual things<sup>86</sup>. Alexander thinks that Aristotle possibly means to say that, although expressions are names of things, we do not use them to signify things, but rather to signify the thoughts (‘affections in the soul’) we have in our minds of things. Aristotle was justified in his claim, he says, that utterances are primarily signs of thoughts, because they are properly used to signify the *thoughts* we have of the

<sup>85</sup> E.g. Ackrill’s rendering of πράγματα at *Int.* 16a7 and 17a38 (as in *Cat.* 5, 4a36ff; 12, 14b19ff.); cf. Boethius II 22, 2-6. It is rightly rejected by others, particularly Nuchelmans (1973), 33-6; cf. Weidemann (1994), 138-9. The basic meaning is also present in the semantic use of πᾶγμα for the content (‘significate’) of a name (ὄνομα); Plato, *Crat.* 390E-391B; 436A; Aristotle, *Sl.* 16, 175a8-9. In a similar vein the grammarians indicate the verb’s content as its ‘thing’; e.g. Priscian speaks of ‘res verbi’.

<sup>86</sup> Boethius II, 40<sup>30-41</sup>7: “[...] quaerit Alexander: si rerum nomina sunt, quid causae est ut primorum intellectuum notas esse voces diceret Aristoteles? Rei enim ponitur nomen, ut cum dicimus ‘homo’, significamus quidem intellectum, rei tamen nomen est, idest animalis rationalis mortalis. Cur ergo non primarum magis rerum notae sunt voces quibus ponuntur potius quam intellectuum?”

things involved.<sup>87</sup> Some lines further on, our spokesman Boethius rightly comments that in calling the ὁμοιώματα ‘affections in the soul’ Aristotle means to say that to think is precisely “to receive an object’s proper ‘image’ in the reflections of the soul”.<sup>88</sup>

Alexander — speaking on Aristotle’s behalf — appears to reject any clear-cut opposition between thinking and reality as suggested in the question “Do the utterances refer to *either* thoughts *or* (actual) things?” Not the objects as such are the proper objects of signifying but the thoughts that are formed of the (actual) things; in Boethius’s words, “quae ex rebus nobis innatae sunt animae passionēs”. Putting it differently, neither actual things (or states of affairs) by themselves nor our intellections as such are under consideration, but ‘things’ (whether or not actually existent) *in as far as they are conceived of and referred to by our expressions*.<sup>89</sup> Admittedly, the Ancient thinkers, realists as they were, believed that there is a real world existing independently of human thought, and that man is capable of grasping it by the activity of thinking; but this does not alter the fact that any actual thinking, including a realist’s, does not go beyond things *as conceived of*; indeed to conceive of a thing as it is independent of thinking is flatly contradictory.

In this context the notion of πρᾶγμα deserves our special attention. As early as some forty years ago Wolfgang Wieland claimed that, generally speaking, to Aristotle, πρᾶγμα has its *locus naturalis* only *within* what he calls ‘the linguistic horizon’, and is merely what one has in mind in each case when one uses a word or a phrase.<sup>90</sup> I could

<sup>87</sup> *Ibid.*, 417-13: “Sed fortasse quidem ob hoc dictum est, inquit, quod, licet voces rerum nomina sint, tamen non idcirco utimur vocibus ut res significemus, sed ut eas quae ex rebus nobis innatae sunt animae passionēs. Quocirca propter quorum significantiam voces ipsae proferuntur, recte eorum primorum esse dixit esse notas.” The flavour of innatism (“innatae sunt passionēs animae”) in Alexander’s exposition would surely not have amused Aristotle.

<sup>88</sup> *Ibid.*, 4312-16: “Similitudinem vero passionem animae vocavit, quod secundum Aristotelem nihil aliud est [omitted by Meiser; see however the older editions, e.g. Migne, *PL* 64, 414 B13] intellegere nisi cuiuslibet subiectae rei proprietatem atque imaginationem in animae ipsius reputatione suscipere.”

<sup>89</sup> For that matter, also Weidemann’s (1994, 148-9) diagram of two dovetailed semiotic triangles is based, it seems, upon a mistaken opposition of ‘thing’ to thought, and thus seems to obscure the crucial point.

<sup>90</sup> Wieland (1970), 170f. (dealing with Aristotle’s *Phys.*): “[...] das πρᾶγμα seinen Ort nur *innerhalb* des sprachlichen Horizontes hat”; “[...] es ist nur das, was man mit dem Wort oder mit der Rede jeweils meint”. Hadot is quite right in rendering (1980, 310-3) πρᾶγμα when opposed to ὄνομα, ‘sens’. Cf. Düring (1966, 86, n. 245, *ad Top.* I 18, 108a21): “*Auto to pragma* bedeutet natürlich weder ‘das Ding an sich’, noch die Idee im Sinne Platons, noch ‘das konkrete Ding’, sondern

not agree more. This ‘horizon’ of things (states of affairs) taken as being conceived of, and as such obtaining or not-obtaining is frequently found in Aristotle.<sup>91</sup> Wieland rightly adduces *Int.* 7, 17a38ff. to corroborate his view. In this passage, Aristotle distinguishes between universal and particular πράγματα, and claims that the universal one is “that which by its nature is said of a plurality of things, and the particular that which is not”. Now it is not actual things that are said of something else, but their concepts. All this cannot come as a surprise because, unlike Plato, Aristotle rejects the actual existence of universal things, because to him, whatever exists is particular.<sup>92</sup> Therefore πράγμα must stand, not for ‘actual thing’, but for the content of an expression, i.e. a thing (rather a state of affairs) *as conceived of*, irrespective of its actuality, and, consequently, it *may* be used, but not necessarily, to refer to actual things as they are understood including their *hic et nunc* appurtenances.<sup>93</sup>

The question of how the thought of something non-existent is possible should be answered on the same footing. Because our intellect is flexible enough to conceive of what is not<sup>94</sup> by itself, and to think something does not require that its object should actually be present, there is no problem on this score.<sup>95</sup> Affections in the soul, then, are thoughts of anything which is conceivable, including what is not intelligible, properly speaking, such as goat-stags. As for the word

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die Frage, das Sachverhältnis selbst”. See also Weidemann (1994), 139 and Hafemann (1998), 51, n. 4. E.g. *An.* III 7, 431a1-2: “Actual knowledge is identical with its object (τῷ πράγματι)”, where πράγμα cannot possibly stand for the outside thing by itself. A lucid exposition of πράγμα as occurring in the grammarian Apollonius Dyscolus, including an assessment of how it features in the broader context of διάθεσις and ἐνέργεια is found in Van Ophuijsen (1993), 733-55; 743: “πράγμα seems to comprise anything which an expression, often but not always a verb, may tell us, normally about a ‘subject’, i.e. about something which is represented in speech”. — It is pertinent to notice, however, that πράγμα often indiscriminately signifies ‘thing-qua-conceived’ and ‘conceived thing’; my semantic Main Rule RMS; section 1.71.

<sup>91</sup> For a more detailed survey of its use in Aristotle see De Rijk (1987), 36-9.

<sup>92</sup> In *Cat.* 10, 12b5-16 and in *Metaph.* Δ 29, 1024b19ff., even non-existent (false) states of affairs are called πράγματα. See De Rijk (1987), 38-9; Weidemann (1994), 138.

<sup>93</sup> At *Apr.* II 27, 70a32 πράγμα stands for the claim ‘that-all-wise-men-are-good’.

<sup>94</sup> To Aristotle, the phrase ‘what-is-not’ is broader than ‘the non-existent’ and primarily means that which is devoid of being.

<sup>95</sup> Cf. *Met.* Z 4, 1030a17-18 about our saying that what-is-not *is* in a way what-is-not. Also what is remarked about the role of memory in *Mem.* I, 449b3-II, 453b10 is illuminating on this score, as well as Aristotle’s remarks about the production of illusions out of earlier sensory impressions, even when we are awake, as this process is described in *Somn.* esp. III, 462b18ff.



πρᾶγμα, λόγος<sub>1</sub> is the linguistic counterpart of what semantically ('trans-linguistically') is called πρᾶγμα. In his pioneering study on Ancient and Medieval conceptions of the bearers of truth and falsity, Gabriel Nuchelmans successfully argued (1973, 33-6) for the view that in Aristotle, *Int.* 12, 21b28, the word πρᾶγμα has the same sense it apparently has at 3, 16b23, namely that of 'state of affairs'. To support this rendering Nuchelmans adduces some passages from Aristotle's other works. At the same time, however, he is of the opinion (35) that Aristotle uses this "vague word rather loosely", and complains that "in particular, he [Aristotle] might have differentiated more clearly between a thing or object which exists or does not exist and a state of affairs which is the case or is not the case, and between a merely believed state of affairs and a state of affairs which actually is part of the world".

In the next lines I will argue for the view that (1) πρᾶγμα has just one focal meaning — which has everything to do with the meaning of the cognate verb in expressions like εὖ (κακῶς) πράττειν ('to be in a happy (unhappy) condition') — namely '[x]'s being so-and-so'; (2) accordingly, it may refer (2a) epistemically, to an object *conceived of* as being in a certain condition, or (2b) ontologically, this object as (really or allegedly) *existing* in the outside world.

Accordingly, Aristotle's use of the term can be characterized as follows: (a) πρᾶγμα is that which underlies an affirmation or negation; (b) the word πρᾶγμα is used to stand for a state of affairs, irrespective of its applying or not applying to the outside world — its actually applying or not applying depending upon the ontic situation under discussion; and (c) the ambivalence, which comes to the fore in the association between the cases (2a) and (2b), is in full accordance with what I have stated before (section 1.71) as the semantic Main Rule RMS.

On this interpretation, the fact that the word πρᾶγμα has ambivalent uses does not give us the right to consider it a vague word which is used rather loosely. Take, for instance, the passage Nuchelmans particularly complained about. At *Cat.* 5, 4a22-b13, Aristotle discusses the nature of λόγοι and beliefs (δόξαι) and their susceptibility to the contraries 'true' and 'false'. It is said that the λόγος, as well as the δόξα 'that-somebody-is-seated', remain absolutely the same; they are called true at one time and false at another only because of a change in the πρᾶγμα (τοῦ πράγματος κινουμένου or κινηθέντος; 4a35-36; 4a37-b1) they are about. It is, Aristotle continues (4b8-10), because

the  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  is, or is not, the case that the  $\lambda\acute{o}\gamma\omicron\varsigma$  is said to be true or false; and the same holds of the  $\delta\acute{o}\xi\alpha$  (cf. 4b2). Now in its first occurrence (4a24-b2),  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  must bear on the thing that (allegedly) exists in the outside world; for it is not the *conceived* state of affairs which changes. But at 4b8-10, the same word evidently does signify the conceived state of affairs, since it would be absurd to talk of a thing in the outside world being, *or not being*, the case; any outside thing, by definition, is the case; in addition, what should we think of a  $\lambda\acute{o}\gamma\omicron\varsigma$  being false as a result of a real (outside) thing's *not* being the case?<sup>96</sup> All this sounds like the magical doings of non-existent things.

Should we then in the wake of Nuchelmans (34f.) and others assume that in thus using the word  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$ , Aristotle fails to distinguish between a state of affairs which is the case or is not the case, as well as between a merely conceived state of affairs and one which is an inhabitant of the outside world? I rather think that Aristotle, as far as his use of the word  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  is concerned, has no need at all for any modern distinctions of this sort. To him, the word's meaning is purposely ambivalent, its focal meaning ('state of affairs conveyed of') happily oscillating between referring to 'a *real state of affairs*', which happens to be conceived of and 'a *conceived* state of affairs *qua* *conceived of*' (irrespective of its being, or not being, the case). This ambivalence is based on the fact that the only difference between these ways of referring depends upon which of the two components of the notion of  $\pi\rho\tilde{\alpha}\gamma\mu\alpha$  is semantically dominant, viz. either the thing taken as such, or the thing in its capacity of being conceived of. Thus to Aristotle (like other Ancient thinkers), there is no strict opposition between understanding expressions in an intensional or in an extensional way, because if expressions are actually used in an assertion their intensional significate always includes a reference to an extensional counterpart, i.e. that which they (allegedly) refer to, regardless of whether or not the truth claim is correct.<sup>97</sup> It is not until the truth claim comes to the test (asking 'Is what is asserted to be the case *really* the case?') that the correctness of the application of the assertible ( $\lambda\acute{o}\gamma\omicron\varsigma_1$ ) to the outside world is taken into consideration, and the difference between [x] and [x]'s being conceived of becomes pivotal.<sup>98</sup>

<sup>96</sup> Pace Whitaker (1996. 27), there are no such oddities as "real non-entities in the world".

<sup>97</sup> Semantic Main Rule (RMS); my section 1.71.

<sup>98</sup> We make use of a similar ambivalence of the phrase 'state of affairs', when we say "The state of affairs you are referring to is not the one we came across". See for this semantic feature the semantic Main Rule RMS (my section 1.71).

The same account applies to the famous passage in *Cat.* 12 where Aristotle introduces (14b9-22) the remarkable notion of ‘reciprocation as to implication of being the case’ which is claimed to exist between an assertible’s truth and the *πρᾶγμα* signified by its actually being the case: if there is a man, then the λόγος by which we say that there is a man is true, and if the λόγος by which we say that there is a man is true, there *is* a man. Although Aristotle does not mean to say that the true λόγος is the cause of the *πρᾶγμα* being the case, none the less the *πρᾶγμα* does seem in a way to be the cause of the λόγος being true; for it is because the *πρᾶγμα* is, or is not, the case that the λόγος is called true or false (cf. 5, 4b8-10 just discussed). Nuchelmans is right in sustaining (1973, 33f.) that the word *πρᾶγμα* in this context has the sense ‘state of affairs’. To support this interpretation he aptly refers to *Met.* Θ 10, 1051b6, where it is stated that because of your being pale we who say this have the truth. He also adduces *Cat.* 11, 14a13-14: “If it is the case that Socrates is well (ὄντος τοῦ Σωκράτη ὑγιαίνειν) his being sick (τὸ νοσεῖν Σωκράτη) could not possibly be the case”. Although the word *πρᾶγμα* is not used in these cases, the assertibles in question (linguistically represented by the accusative *plus* infinitive phrases) should be identified with what is elsewhere (e.g. 10, 12b15) called *πρᾶγμα*. And the parallel passages make clear that the assertibles are states of affairs (*πράγματα*) which *might be held* to be part of the outside world, but perhaps are not really the case. They have by themselves no truth-value, and do not obtain it until they are (rightly or wrongly) applied to the real world by using them in an assertion.<sup>99</sup>

When it comes to his explanation of Aristotle’s identification of the *πρᾶγμα* of a true λόγος with an actual fact or a true state of affairs, Nuchelmans seems to be mistaken. He believes (34) that it is hard to tell whether Aristotle identified the *πρᾶγμα* of a true λόγος with the actual fact or regarded it as a conceived state of affairs which happens to be the case in reality, whereas in the case of a false λόγος Aristotle had no choice (because in that case there is nothing in the world the *πρᾶγμα* can be identified with) but to take it as a *conceived* state of affairs. To my mind, in both cases *πρᾶγμα* means a conceived state of affairs which is applied and held — rightly or wrongly, respectively — to be really the case. As we saw before, it is always a *conceived* state of

<sup>99</sup> To have a truth-value implies being actually asserted. Likewise assertibles can be used for framing a question or wish, but without the interrogative or optative operators they are not questions or wishes.

affairs about which you may ask whether or not it is really the case: on account of “actual facts” such questions are senseless.

A similar use of *πράγμα* is found at *Met. Θ* 10, 1051b2-5, where the notion ‘being in the sense of true and false’ is discussed. “This kind of being, it is claimed, depends, insofar as the *πράγματα* are concerned (ἐπὶ τῶν πραγμάτων), on their being combined or being separated, so that whoever thinks what is separated to be separated and what is combined to be combined has the truth, whereas he whose thought is contrary to the *πράγματα* is in error”. This is explained in the next lines (1051b6-9): “It is not because we think truly that you are pale that you *are* pale, but because of the fact that you are pale we who say this have the truth”. When on account of the *πράγματα* there is talk of their being combined or separated, the assertion or denial of a *conceived* state of affairs is meant, whereas when Aristotle speaks of someone’s thought being contrary to the *πράγματα*, he must have the same conceived state of affairs *as applied* to the outside world in mind. Once again, Aristotle plays on the ambivalent meaning the phrase ‘state of affairs conceived of’ has in accordance with the dominant or non-dominant use of the component ‘conceived of’.

Likewise, any difficulty concerning what Aristotle mentions at *Int.* 9, 19a33 disappears provided we take him to talk of *πράγματα* as the mental contents of a true λόγος, not as things being part of the outside world. Once again, the ‘things and events’ which are under examination in this passage and are called *πράγματα*, are *conceived* states of affairs — or if you like, states of affairs *qua conceived*. To take them as real things in the outside world would force us to assume that Aristotle should accept such clumsy things as ‘non-existent real states of affairs’.<sup>100</sup>

In his discussion at *Cat.* 10, 12b5ff. of “what underlies a negation or affirmation” (τὸ ὑπὸ τὴν κατάφασιν καὶ ἀπόφασιν), Aristotle claims that such an assertible (*πράγμα*) is not itself a λόγος (where this word is evidently used in the sense of λόγος<sub>2</sub> or λόγος ἀποφαντικός; our ‘assertion’). At 12b15 the assertible is called ‘that which underlies either of them’ (τὸ ὑφ’ ἑκάτερον πράγμα), i.e. both negation and affirmation. In *Met.* K 10, 1067b18 Aristotle uses the term ὑποκείμενον for the positive termini presupposed by change, and explains that by ὑποκείμενον he understands that which is designated by a

<sup>100</sup> This passage will be extensively discussed in my section 3.66.

κατάφασις. In this passage the term must stand for an affirmative expression (our κατάφασις<sub>1</sub>), not an affirmative statement, and refers to a pragma of the type conveyed by an accusative *plus* infinitive phrase (τὸ καθῆσθαι τινα as opposed to τὸ μὴ καθῆσθαι).<sup>101</sup> Nuchelmans again wonders whether Aristotle intends his expressions to be understood in an intensional or in an extensional way, i.e. “Does he (Aristotle) mean the thought-content associated with the words or the actual things and states of affairs in the world outside thought and language?” (1973, 35). He rightly concludes (36) that if we take Aristotle to mean that these two expressions, viz. ‘someone’s being seated’ and ‘not being seated’, cannot be true at the same time, it follows that the underlying states of affairs cannot both be part of the outside world at the same time. Only the content of the true expression could be applied to the outside world, while that of the false expression cannot. I think we should adopt the same interpretation as in the previous passages. Both the true expression and the false one are used with reference to a *conceived* state of affairs, the only (but decisive) difference residing in the possibility and impossibility of applying the assertible to the outside world. Therefore any doubts as raised by Nuchelmans are not vouched for by the texts.<sup>102</sup>

All things considered, πρᾶγμα and λόγος turn out to be correlated as the assertible’s content and its verbal expression.

## 2. 23 Aristotle’s use of πρᾶγμα assessed in a broader context

It may be of some interest to discuss Aristotle’s use of the word πρᾶγμα as found in his other works.<sup>103</sup> In the works on ethics (e.g. *EN* I 3, 1105b5; IV 6, 1126b12),<sup>104</sup> πρᾶγμα is found most clearly as sharing the semantic area with the verb πράττειν (‘to achieve’, ‘to act’) and the *nomen actionis* πράξις (‘doing’, ‘action’); in these passages it

<sup>101</sup> Cf. *Phys.* V 1, 225a6.

<sup>102</sup> Nuchelmans (1973), 36: “(...) Aristotle expresses himself in such a way that no definite answers to our questions can be given. Concentrating on some aspects one can read him in one way, concentrating on other aspects one can read him in another way”. As a matter of fact, this ‘either-or’ is a matter of ambivalence, not ambiguity; my sections 1.72 and 13.3 (Vol. II).

<sup>103</sup> De Rijk (1987), 36-9. Also our sections 8.41; 8.43 (Vol. II).

<sup>104</sup> Ruijgh points out (1979, 73) that generally speaking, in post-Homeric Greek τὰ πράγματα means ‘l’état des choses’, ‘l’état des affaires’. Similarly, the content of Dialogues is called their πράγματα; Mansfeld (1994), 29. In medical literature the word is used for the conditions of a patient, e.g. Hippocrates, *Prognosticon*, ch. 1. For the general sense of πράγματα = ‘circumstances’ see Liddell & Scott s.v. III 1.

has the sense of 'deed'. As I said before, *πράγμα* in this sense should be associated with the use of the cognate verb (in the sense of 'experiencing certain fortunes') as found in the phrases *εὖ πράττειν* ('fare well') and *κακῶς πράττειν* ('fare ill').

At *Pol.* III 9, 1280a17-19 and IV 15, 1299b18, things (*πράγματα*) are opposed to persons. Still another type of opposition occurs in the numerous passages in which *πράγμα* stands for a thing as contrasted with its property. For instance, *Top.* I 5, 102a19 and 8, 103b8; *SE* 24, 179a28; *Phys.* IV 14, 223b25; V 3, 226b30 and 4, 227b28; *Meteor.* IV 1, 379a32-b1. This may be compared with *Rhet.* I 1, 1354a15-23; 1354b17; 1355a2 and 19, and III 4, 1415b6, where the phrase *τὰ ἔξω τοῦ πράγματος* is used to stand for 'what is beside the point under discussion'; again, *πράγμα* is the thing taken under a certain aspect, rather than the thing *tout court*.

There are also many occurrences of the word *πράγμα* in a similar context to that which we came across in the previous section. They all concern cases that require a distinction between a mental activity and what it is about. In *Met.* Λ 9, 1074b38ff., *πράγμα* qua 'knowledge', and the internal object of thinking, respectively, is contrasted with the act of thinking by itself, despite the fact that it still is part of the mental domain:

*Met.* Λ 9, 1074b38-1075a5: "What it is to be thinking (*τὸ εἶναι νοήσει*)<sup>105</sup> is not just the same as what it is to be thought of. Or rather (*ἦ*): in some cases the knowledge coincides with the object (*τὸ πᾶν*); that is to say, in the productive processes, inasfar as they are taken apart from their material impact, it is the thing's beingness and quiddity (*ἡ οὐσία καὶ*<sup>106</sup> *τὸ τί ἦν εἶναι*) which <is the proper object>; but in the speculative domain, the definiens (*λόγος*), including the grasping of it (*νοήσις*), <is the object>.<sup>107</sup> Since, then, thought (*τοῦ νοῦ*) and what is thought of (*τοῦ νοουμένου*) coincide in the case of things that have no matter, they will be the same (*τὸ αὐτὸ ἔσται*), and thinking (*νοήσις*) will be one with what is thought of (*τῷ νοουμένῳ*).

In all such cases, the word *πράγμα* refers to that which the act of knowing is about, i.e. not the thing taken by itself, but qua being conceived of; otherwise, we would be faced with the awkward position that thought and reality itself should coincide. In a similar context

<sup>105</sup> For the technical phrase *τὸ εἶναι νοήσει* = *τὸ νοήσει εἶναι* see my section 1.64.

<sup>106</sup> For the identitive or explicative use of *καί* in this context and at 1075a3 see our *Index* s.v.

<sup>107</sup> Cf. *An.* III 4, 430a2-9.

the well-known adage ‘*anima quodammodo omnia*’ found in *An.* III 8<sup>108</sup> deserves our special attention. In this chapter Aristotle sets out to summarize his treatment of sensation in III, chs. 1 and 2, and of thought and knowledge in chs. 3-7:

*An.* III 8, 431b20-24: Now summing up what we have claimed about the soul, let us assert once more that in a way the soul is all there is (τὰ ὄντα πῶς ἐστὶ πάντα); for what is is either perceptible or intelligible, and knowledge is in a way what is known (τὰ ἐπιστητά), and sense-perception what is perceived (τὰ αἰσθητά). In what way this is so we must consider.

Hence Aristotle goes on to explain that just as there is a distinction between the faculty of knowing (perceiving) and the corresponding activities, there is a matching distinction between their objects. The relationship to the objects is indicated by the phrase ‘in correspondence with the things’ (εἰς τὰ πράγματα). It is plain that these ‘things’ (πράγματα) are not the outside things by themselves (for these are not distinctive of perception as opposed to intellection), but things qua differently observed by the subject.

In the opening chapter of *SE* the phrase αὐτὰ τὰ πράγματα (‘the things themselves’) is used (165a6) to tell a thing’s name apart from what the name conveys. It should be borne in mind, however, that those ‘things taken by themselves’ are still things (no matter if they are real or allegedly real) *conceived of* and brought up by the use of certain names. The entire passage concerns the supposed representative nature of linguistic expressions and the possibility that those who are not familiar with the force of names may fall victim to false reasonings, precisely because they are in error about whether the *conceived* states of affairs apply or are merely conceived of (my section 5.81). Likewise at *SE* 16, 175a8 the domain of things is contrasted with the linguistic domain of expressions; cf. 19, 177a31 and 22, 178a26. In a similar way in *Top.* I 18, 108a21, Aristotle claims that a deduction should concern the object which is designated by an expression, rather than just the terms used taken by themselves as linguistic tools. In *GC* I 8, 325a17-18, theoretical views (λόγοι) are opposed to the things (πρᾶγματα) they are (supposed to be) about. At *Phys.* III 8, 208a15-16, πρᾶγμα is contrasted with thinking (νοήσις), in a way similar to *Int.* 1, 16a7-8. Finally, in *Top.* VI 7, 146a3-13, πρᾶγμα (‘thing to be defined’) is distinguished from the content of the definiens formula (τὸ κατὰ τὸν λόγον).

<sup>108</sup> III 8, 431b21; cf. III 4, 430a3-9, and a14.

It is important to see that in all the occurrences just mentioned *πρᾶγμα* does not merely stand for a thing in the outside world as taken by itself. This is particularly clear in uses such as at *Poet.* 14, 1453b2-5 and 1454a13-14, where τὰ πράγματα are not just the events occurring in the outside world but rather the events as narrated in a play, so to speak, the ‘plot’.<sup>109</sup>

No doubt, sometimes the emphasis is on the *πρᾶγμα* as *applying* to the outside world. For instance, at the passage of the opening chapter of *SE* we already referred to (1, 165a6-10), and *Phys.* VIII 8, 263a17-18, where in the phrase πρὸς τὸ πρᾶγμα καὶ τὴν ἀλήθειαν, the word *πρᾶγμα* is juxtaposed to ἀλήθεια to convey the notion ‘in view of the actual state of affairs’, viz. how movement in fact occurs. Similarly, at *Met.* A 3, 984a18, the phrase αὐτὸ τὸ πρᾶγμα means ‘reality itself’. A similar use found in *EN* IX 10, 1171a13-14, where ἐπὶ τῶν πραγμάτων stands for ‘in practice’ (lit. ‘on the side of things’).

## 2. 24 Διάνοια and πρᾶγμα

The word *διάνοια* is generally used to refer to the faculty, or activity, of discursive thinking, and is always linked up with the connotation of discernment or analytic perception, which is articulated by the prefix *δια*.<sup>110</sup> So for the most part *διάνοια* occurs in contexts which concern the uniting or disconnecting of notions. For instance, at *Met.* E 4, 1027b27-35, where *διάνοια* is contrasted with *πρᾶγμα*, it means thought taken as a mental activity consisting in compounding and disconnecting.<sup>111</sup>

One passage from *EN* is of particular interest on this score, in that it takes (VI 9, 1142b12-13) *διάνοια* to be a process of searching (ζήτησις) for truth as opposed to its result, viz. the assent and dissent which results in an opinion (δόξα).<sup>112</sup> Similar uses are found in *Met.*

<sup>109</sup> Mansfeld (1994), 29; 36; 49. The rhetorical origin of this use is stressed by Hadot (1980), 309f.

<sup>110</sup> See the lucid entry in Bonitz, *Index*, 186a2-b46.

<sup>111</sup> Bonitz, *Index*, 186a52-55: “cogitandi actio quae διάνοια vocatur, praecipue cernitur in notionibus vel coniugendis vel dirimendis”. For its counterpart, νόος as the uniting faculty (as well as the faculty that grasps simple notions) see e.g. *APo.* II 19, 100b8-11; *An.* III 6, 430b6; *Met.* A 7, 1072b21.

<sup>112</sup> Nuchelmans (1973), 24. For the rest, this does not alter the fact that — in accordance with Aristotle’s basic semantics; see the semantic Main Rule RMS; section 1.71 — *διάνοια* is frequently found to stand for discursive thought *including* its object; Bonitz, *Index*, 186b4-15. In a similar vein, διάνοια is sometimes qua significare opposed to the linguistic tool conveying it (ὄνομα, λόγος, λέξις); *Top.* I



E 4, 1027b27ff. (cf. K 8, 1065a22), where Aristotle claims that ‘what is’ qua truth depends on an act of combining accomplished by thought (ἐν διανοίᾳ; ἐν συμπλοκῇ διανοίας).

The sixth Book of *EN* (2, 1139a21-26) offers another interesting piece of evidence for the use of the word *διάνοια*. In this context, affirmation and denial in thought are paralleled with pursuit and avoidance in desire: both affirmation and pursuit are deliberate choices for ‘yes’, as their counterparts are choices for ‘no’.

### 2. 3 Συμπλοκή and σύνθεσις. *The role of διαίρεσις*

As is argued for elsewhere (my sections 2.12-2.14; 4.31), both the Platonian and the Aristotelian statement-making utterance (the λόγος εἰρημένος, and the λόγος ἀποφαντικός, respectively; our λόγος<sub>2</sub>) should be understood in terms of a monadic expression, to be labelled ‘assertible’, governed by the assertoric functor ‘is’ or ‘is not’, and surely not in terms of our ‘S is P’ construct, in which those verbs are taken to represent the ‘copula’ linking up a predicate *P* with a subject *S*. None the less, our alternative analysis too involves the notion of ‘combining’, indicated by σύνθεσις or συμπλοκή.

The decisive question is what precisely the act of combining signified by these words bears on; is it the composition occurring within the (compound) assertible, or the act of asserting expressed by the assertoric operator? To put it otherwise, are the acts of combining (and separating) as such to do with statement-making, which is productive of our λόγος<sub>2</sub>, or do they only concern the formation of its main component, the assertible (our λόγος<sub>1</sub>)? To put it in terms of the ὀνομάζειν and περαινέειν levels, should the combined (or separated) expressions be understood in terms of just bringing up something, or of asserting (or denying) something? I shall argue in this section that just as λόγος is ambivalently used for both ‘assertible’ (λόγος<sub>1</sub>) and ‘assertion’ (λόγος<sub>2</sub>), similarly συμπλοκή and σύνθεσις may stand for both the combination of two or more categorial notions (whether or not in an assertible) and the linking up of the assertoric operator ‘be’ with an assertible.<sup>113</sup>

18, 108a23; *SE* 10, 170b12-20; *Rhet.* I 13, 1374b13; II 26, 1403a36 and b2; III 1, 1404a19; III 10, 1410b27; *Poet.* 6, 1450a6, 36 and b4-12; 19, 1456a36-b8; *Met.* A 4, 985a4.

<sup>113</sup> The term διαίρεσις — which in *Intl.* occurs in one paragraph only, viz. in the

2. 31 *What precisely does συμπλοκή bear on?*

In Aristotle (like in Plato) the word συμπλοκή — which literally means ‘inter-weaving’ — refers to the combination of ὄνομα and ῥῆμα to make up a λόγος, which is a harmonious compound that can be (or is actually) used as the assertible element of a statement-making utterance. In *Cat.* (4, 1b25ff.), the ten categories are presented by Aristotle as ‘that which is said without *any* combination’ (κατὰ μηδεμίαν συμπλοκήν), and they may seem to be the products of what later became known as ‘simple apprehension’. Now ‘simple apprehension’ is not only opposed to ‘assertion’ (‘Man is pale’), but also to combining concepts from different categories (‘pale man’).<sup>114</sup>

The use of μηδεμίαν (‘any’) in the aforesaid phrase, I take it, rules out both the idea of ‘being involved in framing a statement-making utterance’ (our λόγος<sub>2</sub>), as well as that of ‘surpassing some one category’. This twofold elimination suggests a twofold use of συμπλοκή, one on the onomastic level, in the sense of ‘combination of two or more categorial modes of being’ just to make up an assertible, the other on the apophantic level, bearing on the combination of an assertible with an assertoric operator. In line with the foregoing discussion, this leads to a distinction between συμπλοκή<sub>1</sub> and συμπλοκή<sub>2</sub>. Let us examine the several occurrences of this noun as well as the verb συμπλέκεσθαι on this account.<sup>115</sup>

## (a) συμπλέκειν

As a matter of fact, Aristotle frequently uses the verb on the onomastic level. For instance, at *An.* I 2, 404b27-30, he points out that since the soul appears to contain one element which produces movement and another one productive of knowledge, some thinkers (Xenocrates and his companions are meant) have compounded (συνέπλεξαν) it of both, explaining the soul as a ‘self-moving number’; at *ibid.* 5, 409b11-18, the same view is referred to in terms of

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opening chapter (16a12 and 14) — must be taken as the assertoric denial of the σύνθεσις referred to by the compound assertible, rather than a separation of its components; cf. *Cat.* 10, 13b10-11; *An.* III 6, 430b1-6; *Rhet.* II 24, 1404a24ff.

<sup>114</sup> Definitorial concepts like ‘rational animal’ (equaling the simple concept, ‘man’) are considered to be grasped by simple apprehension.

<sup>115</sup> Apart from the physical sense of συμπλέκεσθαι (Bonitz, *Index*, p. 718a45-54), the verb has in Aristotle the grammatico-logical sense of the combination or mutual involvement of two or more notions; Bonitz, *Index*, 718a54-b12. Bonitz speaks somewhat loosely of the verb being used “de coniungendo *praedicato* cum *subiecto* vel *accidente* cum *substantia*” (718b10-11), and instances *Met.* Γ 4, 1007b1-3, where attribution, not sentence predication is meant.

adhibiting an (unfelicitous) definiens of the soul that will lead its adherents into many difficulties. At *Phys.* II 3, 195a32ff., Aristotle deals with several ways in which something is the cause of something else. He claims that an agent may be brought up, not qua agent, but under an appellation according to one of its coincidental modes of being. We may bring up the cause of a statue as 'Polyclitus' (including the use of appellations from the same category, like 'man' or 'living creature'), or using the essential name 'sculptor', and even by means of expressions containing more or less remote attributes, such as '\*the pale' or '\*the educated'.<sup>116</sup> It is also possible, Aristotle says (195b10-12), to combine such elements into a compound expression (συμπλεκόμενα) and to thus bring up the cause, by calling it neither 'Polyclitus' nor 'sculptor' but 'Polyclitus-sculptor'. At *APr.* I 37, 49a8, compound appellations (συμπεπλεγμένοι κατηγορίαι) are contrasted with simple ones (ἀπλᾶι). The simplex is used at *Int.* 11, 21a1, where compound appellations are called πεπλεγμένα.

(b) συμπλοκή

Noticeably, the verb συμπλέκειν (including its participles) is never used on the apophantic level.<sup>117</sup> But what about the noun συμπλοκή? Let us first return to the above-mentioned passage of *Cat.* (4, 1b25ff.). The ten categories are presented as tools for calling up things according to ten distinct modes of being, regardless of whether the expressions signifying them actually apply to the outside world. On this understanding, the categories are precisely what is spoken of in the opening lines of *Int.*: thoughts that are present in the soul without their possessor being in truth or in error, because their application (affirmatively or negatively) by the thinker to the outside world is out of the question; consequently, they are as yet not involved in any instance of statement-making on the apophantic level. By saying that *any* combination is ruled out, even *compound* assertibles (which by definition contain the combination of two or more different categorial modes of being) on the onomastic level are excluded as well as, *a fortiori* in fact, those on the apophantic level.

<sup>116</sup> Note that the Greek phrase does not contain the substantive noun 'man', but only uses the masculine form of the substantiated adjective (ὁ λευκός, ὁ μουσικός). The absence of any substantive noun underlines the coincidental nature of the attribute.

<sup>117</sup> Bonitz, who rightly observed (*Index*, 718a55-57: "logice saepe usurpatur de coniugendis in eandem notionem pluribus notis") the verb's use on the onomastic level, wrongly instances (*Index*, 718b11-12) *Met.* Γ 4, 1007b2, as an instance of its use on the apophantic level.

The use of ‘any’ implies that in principle the substantive can bear on either of the two levels.

Actually, the noun *συνπλοκή* is used on either level. The onomastic level is frequently found, e.g. at *Top.* II 7, 113a1; VI 9, 147a33; VII 3, 153a30; 5, 154b16; *An.* III 3, 428a25; *PA.* I 3, 643b16. An example of particular interest is found at *Int.* 11, 20b31ff., where compound appellations (called *συντιθέμενα* at 20b31, and *πεπλεγμένα* at 21a1) are referred to by the term *συνπλοκαί*.

As to the use of *συνπλοκή* on the apophantic level, indicating the combination of an assertible with an assertoric operator in an actual instance of statement-making, things seem to be more complicated. Take, for instance, *An.* III 8, 432a10-11, where imagination (which is taken to be a simple thought)<sup>118</sup> is contrasted with assertion and denial, since, it is claimed, the latter’s property of being either true or false depends on a combination of notions (*συνπλοκή νοημάτων*).<sup>119</sup> However, if we were to assume that the term is used here on the apophantic level, we might be led astray by an optical error, taking Aristotle to claim that the combination of notions is a sufficient condition for there to actually be a true or false statement. What he means to say is that to have an assertible — which is an indispensable component of an assertion — a combination of notions is required.<sup>120</sup> Therefore we should take him to have the assertible’s property of *being susceptible* of truth or falsehood in mind, rather than its actually having a truth-value. That the actualization of this potency depends on the combination of the assertible with an assertoric operator (‘obtains’, ‘does not obtain’) does not mean that the intended *συνπλοκή* also bears on the combination that performs the assertion.<sup>121</sup>

Likewise at *Met.* E 4, 1027b29-33 (cf. K 8, 1065a21-23), reference is made to an act of combining notions that indicate different categorial modes of being. It is implied (E 4) or claimed (K 8) that ‘being true’ “depends on a combination (*συνπλοκή*) in thought”. Once again, nothing forces us to assume that Aristotle means that the compound thoughts produced by combination (or separation) imply

<sup>118</sup> Ross, *ad loc.* 310.

<sup>119</sup> A similar use of *σύνθεσις* is found at *An.* III 6, 430a27; see below, s.v.

<sup>120</sup> It should be realized that Aristotle has assertions of the *de tertio adiacenti* type in mind.

<sup>121</sup> Cf. below my discussion of *An.* III 6, 430a26ff. and *Met.* E 4, 1027b19ff. and b29ff.

by themselves their being asserted or denied and, accordingly, their truth or falsehood, instead of the mere susceptibility to be so.

On the other hand, at *Cat.* 2, 1a16 as well as 4, 1b25 and 2a7-8, συμπλοκή seems to be used in the broader sense comprising its use on the onomastic as well as the apophantic level, as is clear from the addition of μηδεμία ('without *any* combination') at 1b25 and 2a8.<sup>122</sup> Another passage of *Cat.* is of particular interest. In ch. 10, 13a37ff., where the opposition between affirmation and negation is compared to the oppositions between contraries, privatives,<sup>123</sup> and correlatives, the use of συμπλοκή on the apophantic level is more prominent than in the other cases, and even opposed to combinations taken on the onomastic level alone, i.e. the ones only bearing on the framing of assertibles. In this context it is of interest to take note of the infinitival constructions in Aristotle's examples and to render them as *that*-clauses, instead of using (Ackrill *ad loc.*) indicative moods:

*Cat.* 10, 13a37-b15: Clearly, things opposed as affirmation and negation are not opposed in any of the aforesaid ways, for only with them is it necessary always for one to be true and the other one false. For neither with contraries is it necessary for one of them to be true and the other false nor with possession and privation. E.g. health and sickness are contraries, and neither is either true or false; similarly, 'double' and 'half' are opposed as relational, and neither of them is either true or false; nor are cases of possession and privation, such as sight and blindness. In short, nothing that is said without any combination is either true or false; and all the aforesaid cases *are* said without combination. It might, indeed, very well seem that the same sort of thing does happen in the case of contraries when said *with* combination, e.g. (γάρ) 'that Socrates is well' is contrary to 'that Socrates is sick'.

It is plain that Aristotle has the application of contrary states of affairs to the outer world in mind, so in this context συμπλοκή must refer to the combination of assertoric operators with a pair of contrary assertibles. The next lines will confirm this:

*Ibid.*, 13b15-19: Yet not even in these cases is it necessary always for one to be true and the other false. For if Socrates exists one will be true and the other false, but if he does not both will be false; neither 'that Socrates is sick' nor 'that Socrates is well' will be true if Socrates himself does not exist at all.<sup>124</sup>

<sup>122</sup> Ackrill (1963), 73f.; my section 4.31.

<sup>123</sup> In this section 'privatives' is shorthand for 'things opposed as privation and possession'.

<sup>124</sup> For the continuation of this passage see our section 4.85.

Obviously, unlike the ‘things’ opposed contrarily or privatively, those opposed as affirmation and negation are not taken as unapplied assertibles, but as assertibles actually involved in fully-fledged assertions. The point at issue is that the ἀπόφασις is not a negated assertible, but a denial, since the negation concerns the assertoric operator.<sup>125</sup> This means that when the opposites in the form of things opposed contrarily or privatively are involved in statement-making (in Aristotle’s words: ‘when they are said *with* combination’), the pair of opposites will contain two affirmative operators, while in the opposition according to affirmation and negation one operator is affirmative, and the other negative. As for the use of συμπλοκή in our passage, at 13b10 this word is indiscriminately used with regard to both the onomastic and the apophantic level, while at 13b12-35 it only refers to the apophantic combination making up opposite assertions about contraries and privatives as compared to the apophantic combination involved in the opposition between affirmation and denial. To put it otherwise, in the former oppositions the assertibles are opposite, and the operators the same, whereas in the latter it is the operator that varies, while the assertibles remain the same.

Recapitulating the foregoing discussions we may conclude that whereas the verb συμπλέκεσθαι always refers to the act of combining (different) categorial notions on the onomastic level to make up an assertible, the noun συμπλοκή is indiscriminately used for combinations on either level, i.e both the one making up assertibles and the one effecting an assertion.

## 2. 32 Σύνθεσις and διαίρεσις

In light of the foregoing discussions, we might expect the verb συντιθέναι and the noun σύνθεσις to be used in a similar way, that is, the verb only on the onomastic level, while the substantive can occur both on the onomastic and the apophantic level. Let us put this surmise to the test.<sup>126</sup>

<sup>125</sup> Note that at 12b6-10 κατάφασις and ἀπόφασις are defined as ‘affirmative and negative *statements*’ (λόγος ἀποφατικός, our λόγος<sub>2</sub>), and clearly opposed to their assertible (in Aristotle’s words: “things underlying an affirmation or negation”).

<sup>126</sup> The word’s use in the physical sense of ‘fitting together’ (as a *nomen actionis*) or ‘compound structure’ is left out of consideration now. For these occurrences see De Rijk (1987), 58, n. 40.

## (a) συντιθέναι

At *ENV* 3, 1131b8, the verb συντιθέναι is used to indicate the coupling of four analogous terms to establish a proportion. At *EE* VII 12, 1244b34-35, it means 'to take two things (into consideration) at the same time', whereas in the *MM* it is found (II 9, 1207b21) to indicate the induction of a universal statement by 'putting together' two particular cases of virtues, and at *Rhet.* I 7, 1365a16, it stands for piling up facts in a climax. At *Poet.* ch. 3, 1453a19, the verb stands for the composition of tragedies, at *Rhet.* I 1, 1354a12, for framing treatises on rhetoric, and at *HA.* VI 31, 579b4, for the invention of a fable, and at *Rhet.* I 15, 1375b10, for making up a contract (cf. *Pol.* I 9, 1257a35). At *Met.* Θ 3, 1047a31, Aristotle uses the participle συντιθεμένη to indicate the connection between the two closely related notions ἐνέργεια and ἐντελέχεια (just as in Plato, *Statesman* 276E2, the verb is used for the association of βασιλεύς and τύραννος). At *An.* III 6, 430a31-b1, the participle συντιθείς is used to express the combining of tense (time) with attributes. Plainly, these occurrences all more or less bear on the (onomastic) combination of words or thoughts, without specifically designating the (apophantic) act of asserting.

At other occurrences the verb seems to convey the act of putting together notions from different categories. At *Int.* 11, 20b31, the participle συντιθέμενα is used for compound appellations (whether or not from one and the same category), such as ἄνθρωπος ζῶον or ἄνθρωπος δίπους, and ἄνθρωπος λευκός, respectively; at 20b14 the perfect participle was used in a similar way. At *Top.* I 15, 107a37, the participle συντιθέμενον means a definiens such as 'white body' (λευκὸν σῶμα) made up by a substantive and an adjective, so this use comes close to framing an assertible from different categories. *Rhet.* II 24, 1401a24-25 presents an interesting use of the verb in contradiction with 'dividing' or 'setting apart', to indicate what in the lore of the fallacies is termed the paralogism of the composite and divided senses:<sup>127</sup> "Another line of argument is to make an assertion (λέγειν) by putting together what is divided (τὸ διηρημένον συντιθέντα) or by dividing what is compounded (τὸ συγκείμενον διαίρουντα)". It should be noticed that in this context the acts of combining and dividing concern assertibles, not the act of asserting (λέγειν). The same holds of *Met.* E 4, 1027b20-22, where truth is said to have the affirmation in the case of what is compounded (ἐπὶ τῷ

<sup>127</sup> The fallacy consists in asserting the erroneous 'sensus'; my sections 5.82 and 5.92.

συγκειμένῳ)<sup>128</sup> and the denial in the case of what is divided (ἐπὶ τῷ διηρημένῳ).

Likewise in *Met.* the verb is used on the onomastic level to express the combination of notions making up an assertible. At Γ 7, 1012a2-5 there is talk of combining things in an assertion or denial, but what is meant is not the apophantic act of combining the assertible with an affirmative or negative operator used by the thinker when he affirms or denies (a2-3: κατάφησιν ἢ ἀπόφησιν);<sup>129</sup> for both the assertion and the denial are spoken of in terms of combining. The same goes for Δ 29, 1024b17-19, where one kind of false πρᾶγμα, quite understandably, is defined in terms of a conceived as opposed to a real state of affairs; the latter depends on the fact that the former's components are actually not combined (τῷ μὴ συγκεῖσθαι), or are incapable of being combined ((τῷ) ἀδύνατον εἶναι συντεθῆναι). At *Met.* Θ 10, 1051b2-13 the verbs συγκεῖσθαι and διηρηῆσθαι are used of extra-mental things being combined and 'being one' (ἐν εἶναι), or separated and 'being more than one' (πλείῳ εἶναι).

We may gather from these occurrences that in its grammaticological sense, like the verb συμπλέκεσθαι, its counterpart συντιθέναι is never used on the apophantic level and so always bears on the combining of words or notions, including the framing of assertibles.<sup>130</sup>

#### (b) σύνθεσις

The noun σύνθεσις is basically used either to stand for a compound structure of physical things, or logico-grammatically, referring to the mental act of uniting two or more concepts.<sup>131</sup> The logico-grammatical use is twofold: either the σύνθεσις merely takes place on the onomastic level and thus bears on a compound of some concepts, or on the apophantic level, asserting that what is signified by this compound obtains.

Let us begin with its apparent occurrences on the onomastic level. For instance, at *SE* 4, 165b26 and 166a23-32; 20, 177a33ff., where it is taken together with διαίρεσις, to make up the matter for the fallacy of ignoring the difference between *sensus compositus* and *sensus*

<sup>128</sup> The technical uses of the perfectum praesens will be discussed in my sections 3.74 and 3.75.

<sup>129</sup> At 1012a4 the phrase ὅταν μὲν ὡδὶ συνθῇ φᾶσα ἢ ἀποφᾶσα means 'whenever (thinking) combines in an act of asserting or denying', rather than 'by asserting or denying'.

<sup>130</sup> For the special sense of συγκεῖσθαι in *Int.* ch. 10, which equally concerns its use on the onomastic level, see my sections 3.74 and 3.75.

<sup>131</sup> For textual evidence from Aristotle see De Rijk (1987), 45-50.



*divisus*.<sup>132</sup> These two ‘sensus’ are concerned with two opposite ways of arranging the operands which are determined by modal operators. One can easily find more examples in the *Corpus*.<sup>133</sup>

Taking first some less apparent cases, among them *An.* III 6, 430a26-b6 deserves special attention. Clearly, both σύνθεσις and συντιθέναι are used in the context of statement-making, which is contrasted to the act of simple apprehension of indivisibles (τῶν ἀδιαίρετων νόησις). However, it is merely claimed by Aristotle in this context that unlike in the case of indivisibles, wherever both ‘false’ and ‘true’ apply, there is *eo ipso* (ἤδη)<sup>134</sup> some uniting (σύνθεσις τις; 430a27-28) of notions as belonging together.<sup>135</sup> Some lines further on (430a30-31) the verb is used to stand for separated modes of being, like ‘being incommensurate’ and ‘being a diagonal’ being combined (συντίθεται); likewise there is talk (430a31-b1) of the notion of ‘uniting’ in cases that involve thinking of things of the past or future: “then one conceives in addition the time, and includes the tense” (τὸν χρόνον προσεννοῶν καὶ συντιθείς). In the same context it is said (430b1-3) that false combinations also depend on an act of uniting (σύνθεσις); for he who calls what is pale ‘not pale’ is combining the notions ‘pale’ and ‘not pale’.<sup>136</sup>

The passage continues (430b4-5) with a remark on the use of a tensed assertoric operator (‘obtained’, ‘will obtain’), and concludes with the remark (430b5-6) that in each particular case it is the mind (νοῦς) that makes things one (τὸ δὲ ἐν ποιοῦν ἕκαστον). In spite of the fact that in this passage they occur in the context of statement-making as contrasted with the formation of ‘indivisibles’ by simple apprehension — which by definition occurs on the ὀνομάζειν level —

<sup>132</sup> Cf. the parallel use at *Rhet.* II 24, 1401a 24-25, mentioned in my previous section and discussed below.

<sup>133</sup> Bonitz, *Index*, 729a59-b13. Its use in *Poet.* and the works on rhetoric has no direct bearing on statement-making. Bonitz’s instances (729a59-b13) of what he calls “σύνθεσις praedicati et subiecti” all concern the word’s use on the onomastic level.

<sup>134</sup> For ἤδη expressing ‘logical proximity’ (‘instantly’) see Liddell & Scott, s.v. 4, and our *Index* s.v.

<sup>135</sup> At *Int.* 3, 16b24, the phrase σύνθεσίν τινα is used to refer to (a) the combination of assertoric being with a state of affairs expressed by an assertible and implicitly also to (b) that of connotative being with any appellative noun; my section 3.37 and at the end of the present section.

<sup>136</sup> Next follows an incidental remark: “It is also possible to call all this an act of separation (διαίρεσις)”. However, elsewhere too the ἀπόφασις is taken as a denial of an affirmative assertible, e.g. *Mel.* Γ 7, 1012a2-5. At *Mel.* Θ 10, 1051b9-13, the affirmative operator is described as the affirmation of the compound, while the negative one is taken to be its negation.

the opposite acts of combining are all concerned with combining (incompatible) notions on the *ὀνομάζειν* level, on which any assertible is framed. The phrase “the cases in which *both* ‘false’ and ‘true’ apply” (430a27) does not bear, I take it, on framing (on the apophantic level) a fully-fledged assertion by means of the assertoric functor, but merely on the formation (on the onomastic level) of an assertible, which, unlike an assertion that is actually made, by itself (i.e. unapplied to the outside world) is *susceptible* “both of being false and of being true”.

A similar occurrence of the combination and separation issue is found at *Met.* E 4, 1027b19, where the notions ‘what-is-*qua*-being-true’ and ‘what-is-not-*qua*-falsehood’ are discussed. It is clear from the outset that the combination and separation issue bears on a mental operation of putting together and setting apart ‘thoughts’ (1027b18-19).<sup>137</sup> The thoughts combined or separated are said to be concerned with the apportionment of the members of a pair of contradictions, which should be taken as contradictory states of affairs, or rather assertibles expressed by infinitival phrases. The objects (‘objective contents’; *πράγματα*) of these thoughts are as such not actual states of affairs occurring in the outside world; on the contrary, they are explicitly denied factual existence, and put in discursive thought (1027b27: *ἐν διανοίᾳ*).<sup>138</sup> Along the same line of thought, the truth under consideration in *Met.* E 4 is the truth involved in a truth *claim*, which bears on assertibles framed by combining<sup>139</sup> thoughts.

In this context, what is stated as true and what is stated as a falsehood are said to depend on combination and separation (*παρὰ σύνθεσιν ἔστι καὶ διαίρεσιν*). On the face of it one might think that

<sup>137</sup> For the following exposition see my section 8.5.

<sup>138</sup> E 4, 1027b25-27. Whitaker (1994, 26-31, and *passim*) seems to be basically wrong in thinking of “combinations and separations of things in the world”, which leads him to adopt oddities like “real nonentities in the world” (27). His expositions on the issue fail to recognize the pivotal difference between mental entities (‘that which is thought’) and things of the real world *qua* thought of, and so cannot satisfactorily explain this important issue. Even a realist philosopher like Aristotle lives up to this distinction, and so he should. Cf. Kahn (1973, 365) on “the Greeks regularly distinguishing between the facts ‘as they are’ and ‘as they are said or thought to be’”. In fact, the very idea that we have the ability to match our views and assertions to Reality implies that the combinations and separations at issue are mental constructions either obtaining or not obtaining, when they are applied to the world in the mental process of statement-making and assertion.

<sup>139</sup> Combined thoughts, in which, in Aristotle’s view, the connotative or intensional ‘be’ is involved, may be separated by the negative operator ‘is not’, and thus equal separated thoughts being asserted by the affirmative operator ‘is’; *An.* III 6, 430b2-6.

*actual* instances of true and false statement-making are referred to. But in point of fact Aristotle only speaks (1027b20-23) of what is combined or disconnected *within* the assertible, not of σύνθεσις as asserting and διαίρεσις as denying: “For to state as truth concerns the affirmation in the case of a compound assertible (ἐπὶ τῷ συγκεκλιμένῳ) and the denial in the case of a divided assertible (ἐπὶ τῷ διηρημένῳ), while to state as a falsehood concerns the opposite of this apportionment”. Thus both the nominal terms and the verbal ones are here used on the onomastic level. The affirmations and negations (denials) themselves will, of course, take place on the apophantic level.

In *Met.* Θ 10, basically the same view is found. In this chapter, the ontic truth of the ‘simples’ is contrasted with statemental truth (and falsehood), which, unlike statemental truth, does not depend on thinking or any other mental operation. As far as combination and separation are concerned, it is combined states of affairs that are in order, which can (and may) be (supposed to be) found in the actual world.<sup>140</sup> Plainly these assertibles or states of affairs act as the arguments for potential assertions, and, accordingly, contain connotative or intensional, non-assertoric (strong-hyparctic) ‘be’.

The works on the art of rhetoric present two more examples of the use of our terms on the ὀνομάζειν level, despite appearances to the contrary. In *Rhet.* II 24 certain lines of rhetorical argumentation (viz. the fallacious enthymeme) are described. One of them concerns ‘the argument of Euthydemus’:

*Rhet.* II 24, 1401a24-31: Another line of argument is to combine in your utterance what is divided or to divide what is combined (τὸ διηρημένον συντιθέντα λέγειν ἢ τὸ συγκεκλιμένον διαιροῦντα); for since these two ways of apprehending seem to come to the same (though often they do not), you have to adopt whichever of them better suits your purpose. This is the argument of Euthydemus, e.g. ‘that anyone knows of a trireme that it is in the Piraeus’, since he knows each of the components (of this assertible)’; and ‘that whoever knows the letters, knows the word’, since the word is the same as the letters which compose it; and ‘that when a double portion is insalubrious, a single portion is not to be called wholesome’, since it is absurd that two good things should make up one bad thing.

<sup>140</sup> Other references to real states of affairs as combinations in which things are compounded in a special constitutive way are *Top.* VI 9, 147a33, 13, 150b22-26, 14, 151a20-32 and VII 3, 153a30; *Phys.* I 5, 188b16-21; *Met.* H 3, 1043b4ff. Notice that it is said that these real combinations should be matched by correct logical combinations describing them.

What Aristotle brings forward here are *that*-clauses, i.e. assertibles to be applied in framing a fallacious enthymeme. The same holds for a passage in the *Rhet. Alex.*, ch. 29, where after having enumerated a number of rhetorical schemes, the author winds up by referring (1436a21-22) to “all the ways of putting words together for purposes of expressing something” (τῆς ἐρμηνείας τὴν σύνθεσιν ἅπασαν).

In the opening chapter of *Int.* the phrase περὶ σύνθεσιν καὶ διαίρεσιν is used (16a12-13) in a way similar to *Met.* E 4, 1027b18ff.<sup>141</sup> In 16a9ff. a distinction is made between ‘thoughts in the soul’ which are neither true nor false, and those which are necessarily one or the other. The distinction is explained in terms of the difference between simple and compound thoughts, the latter being required for there to be truth or falsehood. Simple thoughts are instanced by (the significates of) names and attributes taken by themselves (e.g. ‘man’ or pale’); these thoughts are really without combination or separation. Compound thoughts, on the other hand, consist of combinations of names and attributes, and these are subject to being either true or false. However, combination and separation are to be taken as indiscriminately used on both the onomastic and the apophantic level, to mark off the use of assertibles from the products of simple apprehension, regardless of whether or not the assertion is executed.

At *Phys.* V 1, 225a21 the use of the phrase τὸ μὴ ὄν τὸ κατὰ σύνθεσιν ἢ διαίρεσιν is on a similar footing, and indicates a false assertible conveying a πρᾶγμα that is not, or cannot be, the case, in which elements which do not go together are combined, or elements which are in fact combined are disconnected. Once again, it is assertibles that are involved, expressing either mental or real states of affairs.<sup>142</sup>

The occurrence of σύνθεσις at *Int.* 3, 16b24 seems to be a special case.<sup>143</sup> On the common reading and interpretation, which goes back to the 5<sup>th</sup> century A.D. (Ammonius and Boethius), it is assumed that in this passage there is only talk of the atonic verb ἐστίν, which “helps to signify a sort of combination” (προσσημαίνει σύνθεσιν τινα), where the act of combining is taken to bear on the activity of ἐστίν as a (putative) ‘copula’. On this reading, the occurrence of σύνθεσις would present the only unmistakable example of its use on the

<sup>141</sup> Cf. also *Int.* 10, 20a35-36, where the same idea is expressed, this time without using the phrase περὶ σύνθεσιν καὶ διαίρεσιν.

<sup>142</sup> Cf. *Met.* K 11, 1067b26ff.

<sup>143</sup> This paragraph will be extensively discussed in my sections 3.31-3.37.

apophantic level, to indicate an instance of actual statement-making. However, there are compelling reasons to take the general notion 'be' (εἶναι), which includes both orthotonic ἔστιν and the participle ὄν found in the previous line (16b23) as the grammatical subject of προσσημαίνει, rather than the finite verb ἐστίν.

This reading can be strongly supported: (a) it is the one held by the Greek commentators Porphyry and Alexander of Aphrodisias, who clearly took (the participle in) τὸ ὄν to be the grammatical subject of προσσημαίνει;<sup>144</sup> (b) in this context no reference is found to any διαίρεσις at all; and (c) the σύνθεσις is called 'a sort of'. Therefore it seems quite reasonable to join these Ancient commentators in regarding this act of combining as a special kind of onomastic combination between notions, to wit, that of the empty notion of 'be' with any categorial notion, e.g. ἄνθρωπος as equaling ὦν ἄνθρωπος. This 'be' is indeed an empty, unintelligible container whenever it is taken without what it is combined with (ἄνευ τῶν συγκεκριμένων οὐκ ἔστι νοῆσαι; 16b24-25); thus the participle συγκεκριμένων refers to the combination of co-significative 'be' as linked up with any categorial notion whatsoever.<sup>145</sup> It will be clear that this 'sort of synthesis' is a minor variant of the previous ones, which like their minor variant, have all turned out to act on the onomastic level.

However, since on our reading of the entire passage (16b19-25) it is the general notion 'be' which is under examination, the last line can also be taken to include the use of assertoric 'be', both as appended to a single term — e.g. 'Is: [the (a) man]' — and as ranging over a compound assertible, e.g. 'Is: [(the (a) man & pale) be-ing]'.

## 2. 33 *Résumé*

Summing up my findings from sections 2.31 and 2.32 I would like to state the following points:

- (1) The notion of 'combining' can be expressed by the nouns συμπλοκή and σύνθεσις as well as the verbs συμπλέκειν and συντιθέναι.
- (2) The verbal forms indicating the actions or results of combination (separation) are *never* used on the apophantic level to refer to the framing of actual assertions or denials, but always concern compound assertibles (modern dictums or *that*-clauses). Their relationship to truth and falsehood is merely potential, in that the compounds are

<sup>144</sup> My sections 3.32-3.34.

<sup>145</sup> My section 3.37.

assertibles *susceptible of* being either true or false. This susceptibility is not actualized until in an actual assertion or denial they are applied to something existing (or conceived of as existing) in the outside world.

(3) As for the substantives — which are always used as *nomen actionis*, for that matter — their semantic behaviour is different. The use of the word σύνθεσις seems to follow that of the two verbs in confining itself to the onomastic level, and always conveys the idea of putting together words and concepts to make up aggregates out of them, including assertibles which can become parts of statements, and, in its minor variant, also of the aggregate composed of a categorial notion and connotative or intensional ‘be’. Συμπλοκή, on the other hand, is indiscriminately used by Aristotle on both the onomastic and the apophantic level; thus Aristotle’s use of the term is quite in line with Plato’s.<sup>146</sup>

– (3a) More than once, συμπλοκή is used generically, designating just the notion of combining without differentiating it into onomastic or apophantic, so that its exclusion can be worded by Aristotle by the phrase ‘without *any* combination’ (κατὰ μηδεμίαν συμπλοκήν).

– [3b] On occasion, it is found to indicate on the onomastic level the combination between words and concepts, including notions from different categories to make up an assertible which can serve for statement-making.

– [3c] On other occasions, it occurs on the apophantic level and signifies the combination of an assertible with an assertoric operator to make up a fully-fledged assertion.

## 2. 34 Ἀλήθεια and ψεῦδος, and cognate notions

Kahn (1973, 363-6; 334ff.) rightly points out that in older ordinary Greek ἀλήθεια is surely not the only or the most typical word for ‘truth’. What the word designates — etymologically, and in the archaic use in as far as this reflects the etymology — is not the concept of truth as a direct relationship between statements and the outside world, or between the speaker and what he perceives; what is notionally dominant is ‘truthfulness’ or ‘sincerity’ in one man’s speaking openly to another, *sans arrière-pensée*, without hiding anything in one’s heart. Even in the earliest uses, there is no trace of a

<sup>146</sup> Plato, *Theaet.* 202B5; *Statesman* 278B2; 309E10; *Sophist* 240C1, alongside 259E6 and 262C6; De Rijk (1986), 196-209.

Heideggerian notion of “the *things themselves* emerging from their ‘hiddenness’ or ‘uncoveredness’ (‘Unverborgenheit’)”.<sup>147</sup>

In Aristotle there is a clear link between being and truth: “In every case the first principles of what is must necessarily be true above everything else, since they are [...] a sort of cause of the other things’ being; hence as each thing is in respect to being (τοῦ εἶναι), so it is in respect to truth (τῆς ἀληθείας)”.<sup>148</sup> The word frequently refers to how things really are, for instance, when ἀλήθεια is used in juxtaposition with φύσις.<sup>149</sup> Elsewhere (*Phys.* VIII 8, 263a17-18) ἀλήθεια is juxtaposed to πρᾶγμα, to convey the notion ‘actual state of affairs’ (πρὸς τὸ πρᾶγμα καὶ τὴν ἀλήθειαν). In the *Lexicon* it is said (*Met.* Δ 7, 1017a31-32) that ‘be’ and ‘is’ have the meaning ‘it is true’, and ‘not be’ and ‘is not’ mean ‘it is not true but a falsehood’.<sup>150</sup> In the same Book (Δ 29, 1024b17-1025a1) the notion of falsehood (ψεῦδος) is first divided into ‘falsehood as a state’ (πρᾶγμα-ψεῦδος) and ‘things having a false appearance’. Next, false λόγος is defined in accordance with the previous focal notion of ‘falsehood as a state’, viz. ‘an account that qua false is significative of things being not the case’, which implies that every account is false when it is applied to something other than that of which it is true.<sup>151</sup>

In *Met.* E 4 there is a far-reaching discussion of the notion ‘what is qua true’ (τὸ ὡς ἀληθὲς ὄν) and ‘what is not qua falsehood’ (τὸ μὴ ὄν ὡς ψεῦδος). As will be shown later on,<sup>152</sup> in this context no reference is made, as is commonly assumed, to how things truly are, but how someone thinks (believes) or claims (by asserting or denying) that

<sup>147</sup> Kahn (1973), 365. The word ἀλήθεια may be used to indicate that something is quite real, or not an illusion. See Thucydides VI, 33. In the preceding lines (VI, 32), the author said that reports of an enemy expedition were coming to Syracuse from many quarters, but were simply not believed at all for a long time. Then in the Assembly Hermocrates came forward, who in the firm belief that he had a clear understanding of the situation, took the floor saying: “Possibly it will seem to you that what I and certain others say about the reality of the expedition (περὶ τοῦ ἐπίπλου τῆς ἀληθείας) against us is incredible, but ... etc.”.

<sup>148</sup> *Met.* α 1, 993b30-31.

<sup>149</sup> *Phys.* I 8, 191a21-26, and other places where ‘the truth’ is said to be the proper object of philosophy, e.g. *Met.* A 3, 983b3; α 1, 993b20; 993a30 and b17; cf. *Cael.* I 5, 271b6; III 1, 298b13; *GC* I 8, 325a17. For similar uses see Bonitz, *Index* 31a41-b19.

<sup>150</sup> This text is extensively discussed below (my sections 7.51-7.52).

<sup>151</sup> My sections 7.41-42 below. The notion of truth seems to be holistic. *EN* I 8, 1098b11-12: “With what is true the facts (τὰ ὑπάρχοντα) all harmonize, but with what is false they soon clash”; cf. *APr.* I 32, 47a8-9: “For everything that is true must in every respect agree with itself”.

<sup>152</sup> My sections 7.54-7.55.

things truly are or are not. Thus the 'being true' under examination is the kind of being that is involved in an actual truth claim, just as being qua falsehood is involved in the actual rejection of such a claim. Therefore τὸ ὡς ἀληθὲς ὄν is in effect that which is *stated to be* truly the case; the same holds *mutatis mutandis* for τὸ μὴ ὄν ὡς ψεῦδος. So both are mental constructs connected with statement-making and, accordingly, dismissed by Aristotle (*Met.* E 4, 1027b33-34; cf. K 8, 1065a21-23), when it comes to establishing the proper object of metaphysics, 'true being'.<sup>153</sup>

The link with thought and belief reappears in *Met.* Θ 10, where the statemental kind of being in the mind (designated here as 'what is true or a falsehood'; 1051b1-2)<sup>154</sup> is said to depend, on the side of the objects, on their being combined (συγκεῖσθαι) or being separated (διηρησθαι); whence it is concluded (1051b3-5) that he who thinks the separated (τὸ διηρημένον) to be separated and the combined (τὸ συγκεῖμενον) to be combined has the truth (ἀληθεύει), while he whose thought is in a state contrary to that of the objects is in error (ἔψευσται). In this passage Aristotle first defines a compound object's being as an actual union of its constitutive elements (e.g. 'being a man' *plus* 'being pale', or, remaining within one category, 'being a man' *plus* 'being an animal'; cf. the examples presented at 1051b9-17 and 20-21); while 'what is not' is determined in terms of certain ontic modes (e.g. 'being a man' and 'being black', or 'being a man' and 'being a stone') being not united ('separated'). Next, to speak truly or falsely is defined in terms of the correspondence between the conceived and the real state of affairs.

After contrasting the truth and falsehood found in compound expressions with the truth and falsehood in cases of simple apprehension (the grasp or '\*mis-grasp', so to speak, of 'incomposites'; 1051b24-25), Aristotle proceeds to contrast the different ways in which there is really truth or falsehood in cases of statements and simple apprehension, respectively. As far as statemental truth and falsity is concerned, he discloses (1051b32-35) the possible relationships between *stating* something's being true or a falsehood and its actually being something true or just a falsehood or non-being. Notice that Aristotle defines both statemental truth and statemental

<sup>153</sup> What is not qua what is stated to be a falsehood also occurs at *Met.* N 2, 1089a28.

<sup>154</sup> Note the same combination of the adjective 'true' and the substantive 'falsehood' as it occurs in *Met.* E 4; our section 8.5 (Vol. II).



falsity as concerning one and the same compound assertible, saying that if the conceived compound<sup>155</sup> is really the case there is truth, and falsity if it is not. Hence ἀληθεύειν ('speaking truly') and ψεύδεσθαι ('speaking falsely') are opposite ways of dealing with one and the same λόγος, so much so that to assert (or to deny) amounts to giving one's assent to (or dissent from, respectively) one and the same assertible.<sup>156</sup>

## 2. 35 *The functions of ὄνομα and ῥῆμα in the assertible (λόγος)*

As will be seen later (my sections 3.25-3.28), the proper task of what Aristotle calls ὄνομα is to bring up a thing for discussion, something that is in fact a ὑποκείμενον or substrate taken as an instance, a subsistent bearer, that is, of an actual instantiation of the categorial mode of being signified by the onoma in question. By performing this job the onoma enables us to frame 'assertibles', which, in their turn, can be used to make up statement-making utterances ('assertions'); see my section 3.25.

The statemental counterpart, rhema (ῥῆμα) — which, properly speaking, is not 'verb' but 'attribute'<sup>157</sup> — has a similar semantic value as an onoma, and is even when taken by itself, Aristotle claims at *Int.* 3, 16b19-20, just an onoma.<sup>158</sup> When used as the constituent of a compound assertible, the rhema has the syntactical function of

<sup>155</sup> This compound assertible may contain a negative attribute like in 'the man's being not black' or 'not a stone'. In such cases the διαίρεσις takes place within the assertible.

<sup>156</sup> Cf. *An.* III 6, 430a27-28. It is noticeable that we come across the expressions ἀληθές (or ἀληθώς) εἰπεῖν, and οὐκ ἀληθές εἰπεῖν (Bonitz, *Index*, 32a23-6 and a36-41), whereas no mention is made of ψευδές or ψευδώς εἰπεῖν. It should be recalled that non-apophantic sentences ('wishes', 'prayers', commands', and the like; see *Int.* 4, 17a2-6) make use of the same assertible as the apophantic one.

<sup>157</sup> My sections 3.26-3.28. Geach (1972, 45) rightly rejects the rendering 'verb', and proposes 'predicable' (in the broad sense of 'what can be predicated'), which seems less fortunate, however, because of the association with sentence predication. As a matter of fact, Geach shares (47) the widespread misconception of Aristotle's claim about ῥῆμα at *Int.* 3, 16b7 ("is always a sign of what is said of something else") as though this description bears on sentence predication, instead of mere attribution.

<sup>158</sup> By ignoring Aristotle's explicit remark at 16b19-20 and misled by his own identification of attribution with sentence predication (and, consequently, not telling apart a term's use on the ὀνομαζέειν level from that on the περαινέειν level), Geach too sharply marks off (44ff.) the rhema from the onoma as 'predicate' vs. 'subject'. Hence his complaint (47) that Aristotle's adoption of the two-term theory was "a disaster, comparable only to the Fall of Adam" is just a shot in the dark, entirely based as it is on his distortion of Aristotle's onoma-rhema theory.

serving as its ‘comment’ component, qualifying or determining what is signified by the onoma which acts as the assertible’s ‘topic’ component; my sections 3.26-3.27. For example, when taken by itself the rhema ὑγιαίνειν (‘be healthy’ or ‘thrive’) has the same semantic value as the onoma ὑγεία, whereas in the context of an assertible (or an assertion) it additionally signifies ‘health’ (i.e. the mode of being healthy) as obtaining *now*, as Aristotle claims at 16b7-9, i.e. as a form actually inhering in the substrate referred to by the onoma.<sup>159</sup>

As we saw before, the compound assertible or λόγος formed by an onoma *plus* rhema should be considered a monadic element which can serve as the assertible part of an assertion, and should be well distinguished from (and is often opposed by Aristotle to) the fully-fledged assertion made up by the assertible as ranged over by the assertoric operator ἔστιν (our sections 1.51-1.52 and 2.11-2.13; 2.16).

It should be continually borne in mind that to Aristotle, any semantic value, whether signified by an onoma or a rhema, includes connotative (intensional) being.<sup>160</sup> For example, ‘man’ (ἄνθρωπος) equals ‘man-be-ing’ (ὄν ἄνθρωπος), and ‘thrives’ (ὑγιαίνει) equals ‘is healthy’ (ὑγιαίνων ἔστιν). This connotative being amounts to the actualization of the form signified by the onoma or rhema. The actuality as involved here, however, does not as such comprise facticity or existential import; my section 1.64; also 1.52, items (3), (5), (6), and (8)-(10).

Neither the onoma by itself nor the rhema by itself, nor the assertible made up by an onoma *plus* rhema have existential import. It is the assertoric operator ἔστι that makes them a λόγος ἀποφαντικός (‘apophantic account’), and yields them existential import. Apophantic accounts divide into affirmation and negation. The affirmative and negative assertions that are concerned with one and the same πράγμα, which in fact serves as an assertible, are opposed either as contradictory or as contrary. We should be well aware that to Aristotle, the relationships of contradictoriness and contrariety are primarily between their common assertibles.<sup>161</sup>

<sup>159</sup> For this time connotation, my section 3.24; for the sense of ‘actually’ as opposed to ‘factually’, my *Index*.

<sup>160</sup> My section 1.64. Note that as far as onomata are concerned, the notion of oneness too is connotatively included; *Met.* Γ 2, 1003b6-1004a2.

<sup>161</sup> The items of this section are extensively discussed elsewhere (my sections 2.2 and 2.21 and 3.41-3.42; 3.53-3.54; 3.6-3.8).

2. 4 *The semantics of the Categories: Categorization*

The categories of being play a prominent role in Aristotle's philosophy. In fact, the doctrine of the ten categories is his answer to the famous 'one individual—many names' problem.<sup>162</sup> But Aristotle's approach to the matter is not only of theoretical interest: in any area of investigation his strategy of argument pivots around sophisticated categorizations. Misunderstandings about the proper nature and purport of the doctrine of the categories are bound to obscure central issues of Aristotle's thought.

2. 41 *The Aristotelian categories are classes of names, not sentence predicates*

As will be extensively argued for in my section 4.14, Aristotle's use of the ten categories should not be explained in terms of sentence predication, let alone in the fabric of the post-Aristotelian (in fact, Ammonian-Boethian) 'S is P' construal. As a matter of fact, it is primarily the 'one individual—many names' issue which is at the basis of Aristotle's distinction of the ten categories of being: when we are going to talk of [x] we can assign many different names to it and, accordingly, bring it up under several appellations, all depending on the aim of our discussion. For instance, when we speak about Socrates (or the old beech in our garden), we may call him (it) up as, say, 'this man', 'this bearded philosopher', 'Plato's beloved Master' etc. ('that tree', 'that showpiece of our garden' etc.). It is the naming that counts, rather than the syntactical position (subject, predicate noun, or (in)direct object etc.) of the expression designating our object, take in a statement or argument. So the use of the categories is primarily a matter of semantics, not syntax.<sup>163</sup>

The list of categories corresponds to the general idea that whatever is is a *rendez-vous* of the substrate's subsistent mode of being falling under the first category, οὐσία, *plus* a gamut of coincidental modes of being. Given that both the substrate's mode qua hypokeimenon and each of its coincidental modes logically imply generic categorial modes, one and the same thing can be brought up in various ways. Thus it cannot come as a surprise that Aristotle (*Cat.* 8,

<sup>162</sup> My section 4.14. Also De Rijk (1980), 61f.

<sup>163</sup> My sections 4.14 and 4.32. It should be borne in mind that the semantic role of the categories has everything to do with Aristotle's view of statement-making, in which there is no room at all for copulative predicating; my sections 1.51; 2.13–2.15.

11a37-38) claims that there is nothing absurd in a thing's being counted in more than one category.

Thus the list is much more than a mere classification of beings meant to catalogue the things of the outside world according to their kind of being (including the two main areas of 'substances' and 'accidents' in particular), as if Aristotle meant to instruct us about what we could come accross as inhabitants of our world.<sup>164</sup> Instead, it aims to distinguish the different ways in which we can call up *subsistent* beings — indeed the only things there are — for discussion. Thus the question of whether the categories are *either* a classification of things *or* of names is inappropriate; what is classified is not *things* by themselves, nor *names* by themselves, but *things according to their mode of being* expressed by a categorial designation.<sup>165</sup>

Likewise, the category of quantity classifies the various ways in which subsistent things (οὐσίαι) can be brought up. It is in a similar vein that to Aristotle, properly speaking, τόπος is not a thing's quantitative property, but rather a subsistent thing itself *as brought up* under the aspect of being at a certain spot. Hence *pace* Algra (1995, 123; 127-34), I cannot see why the way in which τόπος is presented in

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<sup>164</sup> Bäck (2000, 132ff.) observes that Aristotle seems to be inconsistent in giving a fourfold division of real objects in *Cat.* 2, and a tenfold division of those same real objects in *Cat.* 4. He remarks (150) that many commentators have complained that Aristotle is doing the same task twice, but gets different results, and hence has two, inconsistent lists of the ultimate types of being. Bäck reasonably argues that Aristotle is doing two different tasks, and giving two different answers, so that this problem is a pseudo-problem. As I take it, the complainers should realize that Reality is not divided, neither in a twofold nor in a tenfold or any other way. Thus the categories are not meant by Aristotle to provide an objective classification of different objects, subsistent objects alongside non-subsistent objects; to Aristotle, all objects are subsistent. It is our mind which with a view of a certain investigation or discussion, discerns several modes of being belonging to the objects under examination. Admittedly, Aristotle is of the (epistemologically optimistic) opinion, shared by all Ancient thinkers, that the structure of Reality allows the mind to proceed in such ways. — In the Early Middle Ages the list of the Aristotelian categories only served to classify a subject matter *before* it was discussed, most of the time irrespective of its place on the list. In his discussion of *Cat.* with Charlesmagne, his alderman for education, Alcuin of York merely makes the emperor familiar with this 'filing system'. For the rest, Aristotle's view of the categories as primarily meant to speak about things in *respect* of this or that of its modes of being does not rule out, of course, the use of the list for elucidating the nature of the subject under examination. E.g. at *An.* I 1, 402a22-25, the question is posed to what category the soul belongs.

<sup>165</sup> This will be extensively discussed in my section 4.1. — The proper role of categorization is also mirrored by the classification of animals in the biological works. This classification too is not an 'animal taxonomy' *sec.* What we find in these works is various orderings. Pellegrin (1987), 313.

*Cat.* should raise problems in the context of the overall ontology of this treatise.<sup>166</sup>

There is one category in particular that provides a perfect illustration of what the categories are, namely the category of the so-called ‘relatives’ (τὰ πρὸς τι). If, for instance, the slave Callias is brought up as a relational being, this by no means implies that he is not a substance, but only that in so far as he is taken as a slave, it is this relational mode of being that is primarily in the speaker’s focus of interest, not one of his many other modes of being, including his being this or that subsistent being (*hypokeimenon*).<sup>167</sup>

## 2. 42 *Categorization*

First and foremost it should be borne in mind that the philosophical problem that formed the basis of Aristotle’s doctrine of the categories concerned the possibility of *naming* things in a non-tautological way, and what since Plato became known as the ‘one individual–many names’ issue.<sup>168</sup> The critical point is not so much whether only statements such as ‘This beech is a beech’ are true, as opposed to ‘This beech is a tree’, but whether something can be brought up for discussion by any name other than its own (cf. the famous Antisthenean position).

Overwhelming evidence can be produced to show that, in many discussions, Aristotle’s line of argument is based upon his use of the categories as names or designations with which things under examination are (or should be) brought up.<sup>169</sup> In my section 2.6 we shall

<sup>166</sup> On the other hand, Algra (134-6) is quite right that the way in which τόπος is introduced as an item in the category of quantity does not suggest the presence of a well thought-out and articulate concept of space and place on Aristotle’s part, and that he is instead outlining the various ways in which things may be brought up as ποσά. This is fully in keeping with the overall approach in *Cat.*

<sup>167</sup> My section 4.5, and my *Epilogue* in Vol. II.

<sup>168</sup> My sections 2.11 and 4.14.

<sup>169</sup> De Rijk (1988), 1-9. Thus categorization as such has nothing to do with statement-making, *pace* the common opinion (see e.g. Rehn 2000, 164-79; 182-5). Remarkably enough, Rehn sometimes qualifies his notion of ‘Prädikation’, coming close to the idea of mere ‘designation’. E.g. 168f.: “Das Gewicht der Untersuchungen in den Kapiteln 2-5 der Kategorienschrift — sie enthalten die Aristotelischen Überlegungen zur Prädikation — liegt dabei *nicht auf dem Prädikationsbegriff, sondern auf dem Begriff des Subjekts*. Was kann (als ὑποκείμενον) in einem Satz *die Subjektstelle* einnehmen, das ist die im Rahmen der Aristotelischen Prädikationstheorie in der Kategorienschrift entscheidende Frage” (italics mine). Likewise he emphasizes (185) that the categories concern the elementary components of the structure and classification of *our speaking* about things, rather than a classification

see that the role of categorization is also pivotal in Aristotle's theory of argumentation, the epistemonik procedure in particular. But before we embark on this discussion, it seems useful to deal with Aristotle's strategy of argument in general (2.51-2.57).

## 2. 5 *The different devices featuring in Aristotle's strategy of argument*

Aristotle's strategy of argument displays a wide range of argumentative tools. Its protagonist is of course ἀπόδειξις, but also other ways of arguing show up very prominently in his works. They will be discussed in the present section.<sup>170</sup> Before we proceed, however, let us take a brief look at the agonistic spirit in Greek culture which I believe is vital to account for the Greeks' practice of argumentation.

### 2. 51 *The agonistic spirit of Greek culture*

Since in his epoch-making work on the history of Greek culture Jacob Burckhardt (1818-97) presented the classic discussion of the role of ἄγών in Greek life,<sup>171</sup> it was standard for almost a century to refer to the Greeks as a people more than others devoted to competition ('der agonale Trieb'). Although in recent years this orthodoxy has been under attack, particularly from anthropologists and ethnographers, M.B. Poliakoff rightly argues that the Greeks did distinguish themselves from other cultures in the number and nature of their competitions, and most significantly in the way they institutionalized rewards and recognition for the victors.<sup>172</sup> Though the Greeks'

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of the things themselves.

<sup>170</sup> Some forms of argumentation, e.g. that 'by hypothesis' or the one 'per impossibile', which mainly figure in the purely logical context of *APr.* will not be registered here. For these see my section 6.22. For 'objection by counter-instance' (ἐνστάσις) see *Top.* II 2, 109b13ff.; 3, 110a32-36; IV 1, 120a30ff.; V 4, 132a28ff.; VIII 2, 157a33ff. For μετάληψις and μεταλαμβάνειν see my *Index*, s.vv., and Bonitz, *Index*, 460a52-60 and 37-49.

<sup>171</sup> *Griechische Kulturgeschichte* (a posthumous edition of his lecture notes, 4 vols Berlin 1898-1902) I, 82-117; 201-6). A.E. Raubitschek, "The Agonistic Spirit in Greek Culture" (in *Ancient World* VII, Chicago 1978, 3-7) takes the agonistic attitude to constitute a code of conduct, the striving for excellence (ἀρετή) and for its recognition in the form of honour (τιμή). The Greeks, particularly the Athenians, were competitive not only in sport and war, but also in art, poetry, music, even in politics and public service. Cf. Aristotle, *EN* I 3, 1095b23; *EE* VII 10, 1242b19-20. See also *Aristotelis Fragmenta* I, *Dialogi* nrs. 65 (1486b26-35, Rose) and 66 (1487a19-20).

<sup>172</sup> Poliakoff (1987), 104. For a broader assessment of the sporting issue see

almost obsessive preoccupation with competitive achievements is predominantly found in the well-known athletic contests, the Athenians' partiality for contest and rivalry had a broader scope.

Greek inscriptions speak favourably about the breadth and depth of devotion to the ἀγών among the Greeks. Poliakoff (1987, 104; 179, n. 50) presents some pertinent specimens. Eight stones from Ephesos record a two-day contest under the direction of an exhibitor of contests (ἀγωνοθέτης) for doctors in surgery, testing the use of instruments, and the presentation of a medical treatise. Lloyd remarks that the Hippocratic doctor found himself in a complex and competitive situation that often called for the exercise of skills in persuasion and debate.<sup>173</sup> Another inscription shows that the island Aphrodisias had a contest for sculptors. Every student of Greek literature is familiar with the conspicuous fact that all extant Greek drama was written for competitive purposes, to be performed in a competition against other poets. In fact, ἀγών covered the full range from the sublime contests of tragic and comic playwrights to ridiculous forms of rivalry in performances of eating and drinking, beauty and kissing.<sup>174</sup> In his *Protagoras* (335A), Plato makes the sophist proudly say that he has fought many a contest of arguments (ἀγωνες λόγων), boasting that by always sticking to his own favourite method he managed to prove better than anyone else (Lloyd *ibid.*, 99). And at *Sophist* 225B-C, where disputation is described as a 'private controversy chopped up into questions and answers', he significantly classifies Sophistic under Agonistic.<sup>175</sup> In Plato's *Meno* 75C-D, Socrates alludes to competitive and eristic arguments carried out with a questioner "who is of the disputatious and quarrelsome kind", and shows Meno what in such

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Erich Segal, "To Win or Die". A Taxonomy of Sporting Attitudes" in *Journal of Sport History* 11 (1984), 25-31. — Rehn, too (2000, 4ff.), emphasizes the importance of competitive dispute for the development of Greek thought.

<sup>173</sup> Lloyd (1979), 97; cf. 90, n. 161; 91, n. 174 (both notes include references).

<sup>174</sup> The same, *ibid.* The author properly quotes from Friedrich Nietzsche's *Homers Weltkampf* (transl. Kaufmann) "Every talent must unfold itself in fighting: that is the command of Hellenic popular pedagogy (...). And just as the youths were educated through contests, their educators were also engaged in contests with each other. The great musical masters, Pindar and Simonides, stood side by side, mistrustful and jealous".

<sup>175</sup> Nietzsche too points out (*ibid.*) that "in the spirit of contest, the sophist, the advanced teacher of Antiquity, meets another sophist". Detel extensively discusses (I, 115-57) the historic background, particularly the socio-economic conditions under which Greek thought developed in the 5th and 4th centuries, including the political situation in Athens and its impact on Aristotle's life (125-32) and the development of Athenian democracy (132-40); in this context he deals (140-57) with the role of rhetoric and dialectic.

cases his own manner of replying comes to: "You have heard my answer; if it is wrong it is up to you to take up the argument and refute it". In his seventh Letter too there is an allusion (344B) to people who employ disputations with malicious rivalry.

A similar spirit of contest lies behind treatises such as Protagoras's work in two books, *Antilogies* (of which only some fragments are extant), and the curious little work composed about 400 B.C., entitled *Twin Arguments* (Δισσοὶ λόγοι).<sup>176</sup> Protagoras, who claimed that there are two contrary arguments on every subject, incites his pupils to debate, reconciling the opposing views or justifying one against the other. The *Dissoi logoi*, probably a series of textbook examples, look like an imitation of Protagoras's method, adducing arguments, more than once rather ridiculous ones, in support of the thesis that e.g. good and evil, truth and falsehood are just the same thing, followed by arguments that they are different.<sup>177</sup> The significance of disputation in Academic teaching is illustratively discussed in Zekl (*Einleitung* XIX-XXVII and 591-4).

Aristotle's strategy of argument should be viewed not only in the light of searching for the truth, but also in the context of the Greek culture of competitive argument and the desire to win. Thus basically argument is meant as a reliable way of defending one's own thesis or opinion about what is held to be true, or arguing against what is defended by others. Aristotle's use of elenctical arguments should be estimated in a similar vein, arguments, that is, which in principle are meant not to prove the truth of one's own position — this is even agreed to be impossible — but to expose the opponent's as entirely untenable.<sup>178</sup> Also Aristotle's view of logical necessity in terms of what I have called 'disputational necessity' (my section 6.12) should be referred to, not to mention his advice to the dialectician in *Top.* VIII 14, 163b34ff. (my section 5.76) on how to manipulate the adversary.<sup>179</sup>

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<sup>176</sup> Guthrie III, 316-19.

<sup>177</sup> It need not come as a surprise that a similar work, *Sic et non*, was written by the truly exhibitionistic Medieval logician, Peter Abelard (1079-1142).

<sup>178</sup> My sections 7.6-7.7 and 7.9. This holds *a fortiori* of what Bolton (1990, 200ff.) aptly calls 'gymnastic dialectics'. "We have good evidence that the parallelisms between political and legal debate on the one hand, and philosophical and sophistic discussions on the other, were explicitly recognized by some ancient writers. All these discussions could be referred to as ἀγῶνες, contests, and the 'agonal' or 'agonistic' features of much classical literature — the balancing of speech and counter-speech, for instance, not just in Thucydides, who presents idealisations of actual debates, but also in epic and drama — are well known" (Lloyd 1979, 253).

<sup>179</sup> Cf. Kapp (1942), 19; Patzig (1969), 148f.; Barnes (21975), 91. Compare



2. 52 Ἀπόδειξις: *Epistemonic proof*

Ἀπόδειξις or epistemonic proof is defined (*APo.* I 2, 71b17-18) as ‘deduction productive of genuine knowledge’ (ἐπιστημονικόν), which means “a deduction by which we obtain knowledge by the mere fact that we grasp it”. At I 24, 85b23-24 this definition is alluded to by the claim that epistemonic proof is a deduction exhibiting the cause or reasoned fact.<sup>180</sup> Its basic ingredients are discussed in *APo.* II, chs. 1-11. The key concept is that of the mediating mode of being or ‘middle’ (τὸ μέσον; Latin ‘medium demonstrationis’) which in the qua-procedure is expressed by the qua-locution, and in syllogistics by the middle term (ὅρος μέσος). In fact, it is the medium that presents the ‘because’, i.e. the cause owing to which the attribute under discussion falls to the substrate under examination, or the reason why it is claimed that this is the case.<sup>181</sup> To find the appropriate medium is meant to enable the investigator to hit upon the proper ‘because’ of an initially unanalysed phenomenon as it is presented by sense-perception; thus this activity is the core of the epistemonic procedure (6.53 and 6.58).

The disclosure of the appropriate medium is accomplished by defining or rather ‘identifying’ the substrate under examination as satisfying the specific universal nature signified by the middle term. That is to say, the investigator applies the definiens expressing a certain quidditative mode of being (i.e. the quiddity commensurate to the attribute under demonstration) to the substrate put before him. Once the substrate is qualified as (*inter alia*) possessing the mediating quiddity, the middle term expressing this mode of being can mediate between the substrate and the intended attribute (6.54). What defining a substrate [x] comes down to is explained by Aristotle along these lines (6.55-6.58).

The pivotal role focalization and categorization play in the invention of the appropriate medium clearly comes to the fore in

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Aristotle’s plea at *APo.* I 19, 81b18-22 for arguing just with a view to plausibility, rather than truth. In fact, the elenctical argument should also be viewed in this context; cf. Whitaker (1994), 2f.; 98-108; 176-82. For the rest, at *Carl.* II 13, 294b7-13, Aristotle criticizes the common habit of pursuing a question no farther than the opponent’s argument goes: “This is a habit which we all share (*sic!*), of relating an inquiry not to the subject matter itself, but to our opponent in argument” (294b7-9).

<sup>180</sup> Cf. *APo.* II 7, 92a35-37.

<sup>181</sup> For this twofold meaning of αἰτία, αἴτιον see Ackrill (1981), 36-41; 94-101.

*APo.* I 19 and 22 (my section 6.39) and II 14 (section 6.59).<sup>182</sup> In the first two chapters, where the main issue is the importance of correct quidditative naming and appellation (predication), called ἐν τῷ τί ἐστὶ κατηγορεῖν, the kernel device κατηγορεῖν is diversified. Aristotle clarifies the semantic difference between bringing up, say, a piece of wood by appellations such as ‘white thing’ (or ‘that thing over there’), or by its proper name ‘log’; in the former case the hearer might be inclined to believe that the speaker is ‘saying nothing’. The epistemonik procedure, of course, requires that we should apply the quidditative way of naming the substrate that precisely matches the attribute under discussion. In II 14, where we find the same issue of correctly defining the appropriate property, Aristotle recommends (98a13-23) the investigator to use phrases to express the appropriate mode of being if there are no suitable one-word expressions available in ordinary language.

That the issue of correct focalization and categorization is prominently present in Aristotle’s mind may appear from the fact that it is addressed as early as in chs. 4 and 5 of the first book of *APo.* (our sections 6.34 and 6.72-6.73). Small wonder indeed that Aristotle never tires of insisting upon the importance of these tools when it comes to making sure that the investigator will precisely hit upon the quidditative property mediating between the attribute and the substrate under examination.

The final chapter of *APo.* (II 19) deals with induction as the procedure preparatory to ἀπόδειξις. It is momentous to further assess the epistemonik procedure by underlining the substantial difference between ἀπόδειξις and ἐπαγωγή (2.53-2.55).

## 2. 53 Ἐπαγωγή in Aristotle: A heuristic strategy

Ross presents (1949, 481-3) a still useful survey of the various uses of ἐπάγειν and ἐπαγωγή, and contrasts as their two main uses (a) ‘the adducing of particular instances’ and (b) ‘the passage from instances to a universal conclusion’. To Ross, in sense (b) the *drawing* of a universal *conclusion* (482) is most prominent. In focussing on this aspect, he underlines not only the inference issue and its validity but also the statemental character of induction. Thus Ross seems to have a blind eye *inter alia* to ‘knowledge by acquaintance’ as a product of

<sup>182</sup> In *APr.* I 28 the discussion of the role of correct categorization is concerned with providing appropriate middle terms of categorial syllogisms (my section 6.21).

induction. As a matter of fact, his reading the modern concept of 'induction', including its inferential force, into the texts forces him to find a telling contrast between senses (a) and (b).<sup>183</sup>

Occurrences of the words ἐπαγωγή and ἐπάγειν are less frequent than one perhaps might expect of an empiricist like Aristotle.<sup>184</sup> Be this as it may, Engberg-Pedersen (1979, 306ff.) has good reason to argue for a unitarian concept of ἐπαγωγή in Aristotle. He claims (307) that Aristotle's concept basically amounts to "coming to see some universal point as a consequence of attending to particular cases".<sup>185</sup> Although I share Engberg-Pedersen's view in many respects — first and foremost his rejection of Ross's idea that Aristotelian ἐπαγωγή is an inferential device — I cannot go the whole way with him, particularly in so far as he apparently takes what he calls 'a universal point' in terms of universal statement-making, and so seems to efface the important borderline between 'induction' (ἐπαγωγή) as an epagogic, heuristic procedure and its use in what Aristotle calls (*APr.* II 23, 68b15-19) 'syllogism springing from induction' (ὁ ἐξ ἐπαγωγῆς συλλογισμός).

In Aristotle the term ἐπαγωγή, I take it, refers to a pre-argumentative procedure consisting in (a) the adduction of one or more particular instances, which (b) is directed towards disclosing a καθόλου

<sup>183</sup> Engberg-Pedersen (1979, 306), who is right in arguing against Ross's contrasting the two senses, and makes a plea for a unitarian concept of ἐπαγωγή in Aristotle, does not take the proper nature of the knowledge involved in the epagogic procedure into consideration; my sections 2.56 and 2.62.

<sup>184</sup> The substantive ἐπαγωγή is found outside the *APo.* (Detel 1993, I, 254, n. 3): *Cal.* 10, 13b27; *APr.* I 25, 42a3; II 21, 67a23; II 23, 68b15ff.; *Top.* I 8, 103b3; 12, 105a13; 18, 108b10; II 5, 111b38 and 112a5; 8, 113b17 and 29; IV 2, 122a19; 3, 123b8; VIII 1, 155b22, 156a1, b14 and 157a8; 8, 160a38; *SE* 4, 165b28; *Phys.* I 2, 185a14; VI, 224b30; 5, 229b3; VIII 1, 252a25; *Cael.* I 7, 276a15; *Meteor.* IV 1, 378b14; *PA.* II 1, 646a30; *Met.* B 9, 992b33; Δ 29, 1025a10 and b15; Θ 6, 1048a36; I 3, 1054b33; 4, 1055a6 and b17; 8, 1058a9; K 7, 1064a9; 11, 1067b14; *EN* 7, 1098b3; VI 3, 1139b28 and 31; *MM* I 1, 1183b16-18; *EE* II 1, 1219a1 and 1220a29; 2, 1220b30; VII 15, 1248b26; *Rhet.* I 2, 1356b1ff. and 1357a16; II 20, 1393a27 and 1394a13; 25, 1402b16. In her pertinent paper (1990) on ἐπαγωγή Caujolle (366-9; 374-82) presents a useful survey of the term's broad semantic area.

<sup>185</sup> Cf. *ibid.*, 318: "*Epagoge* is attending to particular cases with the consequence that a universal point is seen, for which the faculty of nous taken as a generalising ability is responsible". Engberg-Pedersen brings the uses of the unitarian notion ἐπαγωγή as found in various contexts into some kind of order by suggesting a six items scheme (301-5), but (despite his previous remark to the contrary (302)), he seems to take his distinctions somewhat too seriously, I am afraid, when he deems (304) the (home-made) problem whether *Top.* VIII 1, 156a4-5 presents a case of his item 2 or 3 a difficult question. — Detel too (I, 252-62; 297) takes Aristotle's induction to be a heuristic tool, but wrongly admits the possibility of so-called 'perfect induction' to which inferential power is assigned.

element that enables us to understand the formal nature of the particular(s) and its (their) likes. The disclosure of the formal nature does not take place by formal, discursive inference,<sup>186</sup> but is, as it were, jumped upon by an intuitive act of knowledge, and it is this intuitive act that enables us to recognize the particulars as instances of this or that formal nature (see *APr.* II 21, 67a22ff. dealt with below). Aristotelian *ἐπαγωγή* by its very nature is heuristic, not inferential.<sup>187</sup>

As for element (a), *ἐπαγωγή* is understandably associated by Aristotle with sense-perception. Thus at *APo.* I 13, 78a30-38, it is assumed (on account of obtaining the conclusion that the planets are near through their not-twinkling) that the fact that what does not twinkle is near is obtained “through induction or through sense-perception” (δι’ ἐπαγωγῆς ἢ δι’ αἰσθήσεως). Clearly this fact *either* becomes familiar to us through sense-perception, i.e. by merely observing that this or that planet which is near does not twinkle (while it was also observed that remote planets always twinkle), *or* through induction, i.e. in the case of nearby planets these are all recognized as lacking the property of ‘twinkling’. The association of induction with sense-perception also comes to the fore at I 18, 81a38-b9, where it is not only claimed that there can be no genuine knowledge (*ἐπιστήμη*) of the universal without sense-perception, but also implied that the induction of the particulars requires sense-perception “that apprehends particulars”, so that the previous ‘either-or’ formula now becomes a plain ‘both-and’.<sup>188</sup>

The fact that the two types of grasping things are so closely intertwined does not, however, efface the difference between sense-perception and induction. At *EN* I 7, 1098a27-b4 it is said that we

<sup>186</sup> This is rightly stressed by Hamlyn (1976), 168ff., who refers to *Met.* I 3, 1054b33 and 1055a 6, b17. Likewise Engberg-Pedersen, 306f.; 311. The latter uses ‘intuitive induction’ as an appropriate appellation for Aristotelian *ἐπαγωγή*. Note that Ross too (1949, 486) speaks of ‘intuitive induction’ “by which (for instance) we proceed from seeing that a single instance of a certain geometrical figure has a certain attribute to seeing that every instance must have it”, where only the statemental wording (which Ross has in common with all interpreters) is open to criticism.

<sup>187</sup> This is clearly pointed out by Caujolle-Zaslowsky (1990, 369-74), where she aptly opposes the later view of *ἐπαγωγή* held by Sextus Empiricus to Aristotelian induction.

<sup>188</sup> My section 6.38. The significance of sense-perception for the epagogic procedure most prominently appears from *APo.* II 19, 99b35-100b5. The potentials of sense-perception (and implicitly induction) when it comes to arriving at genuine knowledge of the universal, are discussed in *APo.* I 31 as compared to its deficiencies on this score. Cf. *APo.* II 19, 100b5-17, and some lucid passages in the sixth Book of the *NE* VI 11, 1143a35-b5; 2, 1139b13; 3, 1139b15; 6, 1143a3-7), where the role of the *voûs* is dealt with; Engberg-Pedersen (1979), 308-11.

must not in all matters demand an explanation of the same kind, and that in some matters it is enough that the mere fact that things are so-and-so is established, as is the case with starting-points, since ‘the fact that’ (τὸ δ’ ὅτι) is the primary thing and starting-point (πρῶτον καὶ ἀρχή).<sup>189</sup> Now, Aristotle continues, some starting-points are spotted (θεωροῦνται), some by induction, others by perception, others by a sort of habituation, and still others in other ways. Clearly the enumeration is a decurrent series, implying that for some starting-points or principles to be active habituation will suffice, while others require that one should be familiar with them by sense-perception or, one procedural step further, by induction.<sup>190</sup>

The other, complementary element (b), namely the use of the adduced (‘induced’) particular instance(s) in order to focus on some specific character to be detected in it (them), comes to the fore immediately in the opening chapter of *APo*. Here arguments “proceeding by means of induction”<sup>191</sup> are described (71a8-9) as “exhibiting the universal (δεικνύντες τὸ καθόλου) through the particular’s being a clear instance of it”. Other instances are *ibid.*, 71a20-21, and *Top*. I 18, 108b7-11, where it is implied that it is on the basis of resemblances *in particulars* that we grasp the universal: “The consideration of resemblance is useful for arguments based on induction (ἐπακτικὸς λόγος) (...), because we maintain that by induction of particulars on the basis of their resemblances (τῇ καθ’ ἕκαστα ἐπὶ τῶν ὁμοίων ἐπαγωγῇ) we bring about the universal (τὸ καθόλου ἐπάγειν)”.<sup>192</sup>

The complementarity of elements (a) and (b) is unmistakable, and salient to such an extent indeed that one must not, as is done by Ross (1949, 487), and in a way by Hamlyn (1976, 170-2) as well, destroy Aristotle’s unitarian concept of ἐπαγωγή by mutually opposing these elements. Apart from our crown witness, *APo*. II 19, the close association between (a) and (b) appears from *APo*. I 1, 71a8-9 and 20-21, and *Top*. I 18, 108b7-11, all discussed above. On the other hand, one should set apart the complementary elements as distinct, and not (with Engberg-Pedersen) telescope one into the other by

<sup>189</sup> Cf. *EN* I 2, 1094b11-27; *Pol.* VII 7, 1328a19-21; *Met.* α 3, 995a6-17.

<sup>190</sup> Cf. *ibid.* VI 3, 1139b29-30.

<sup>191</sup> *APo*. I 1, 71a6: οἱ δι’ ἐπαγωγῆς; our section 6.31. Elsewhere they are called ἐξ ἐπαγωγῆς, e.g. *APr.* II 23, 68b15; *Phys.* I 2, 185a13-14; *Cael.* I 7, 276a15; *PA.* II 1, 646a30.

<sup>192</sup> A similar description of the role detection of resemblance plays is found at *Top*. I 8, 103b1-6, and I 13 and 16-17; VIII 1, 156b10ff. and 8, 160a38; cf. *Phys.* V 1, 224b27-30; *EN*. VIII 10, 1160b21-1161a9.

defining ἐπαγωγή as just ‘intuitive induction’.<sup>193</sup> The interwovenness between the act of inducing instances and its cognitional objective of seeing their common characteristic most significantly emerges at *Top.* I 12, 105a16-17, where the word ἐπαγωγή first stands for the act of inducing and then refers to the universal characteristic the act is after.

Ἐπαγωγή is defined by Aristotle (*Top.* I 12, 105a13-14) as “the routemarch (ἔφοδος) from particulars to universals”. Hamlyn (1976, 171) rightly stresses that these definitions should not be taken to refer to any procedure of formal inference, but to mean that induction enables an intuitive grasp of the universal, on account of which it is elsewhere (*EN* VI 3, 1139b28-29) said to concern the startingpoint (ἀρχῆς),<sup>194</sup> viz. the universal.<sup>195</sup> Caujolle-Zaslowsky happily characterizes (372f.) Aristotelian induction as “intellectual vision, on the basis of particular elements, of something non-particular”.

It is of major importance to contradistinguish ‘induction’ and ‘syllogism out of induction’, for to ignore the sharp borderline between these two will jeopardize the matching clear-cut distinction between induction and deduction. Hence our first task will be to discuss the syllogism out of deduction as quite different from the epagogic procedure as such.<sup>196</sup>

## 2. 54 *The syllogism based on induction vs. induction as such*

It is obvious and has never been ignored by the commentators that there is a difference between ἐπαγωγή and ἀπόδειξις in Aristotle. The same goes for inductive reasoning and (epistemonical) syllogism (deduction). For instance, at *APr.* I 25, 42a22-24 Aristotle remarks that if ‘being C’ and ‘being D’ are not mutually so related as to make a syllogism, the premisses of the intended syllogism will have been assumed to no purpose, except for the sake of induction.<sup>197</sup>

<sup>193</sup> Ross uses (1949, 483; 486) this label for the epagogic procedure taken without the citation of particular instances.

<sup>194</sup> Reading with codex Parisiensis 1854 the genitive (ἡ μὲν δὲ ἐπαγωγή ἀρχῆς ἐστὶ καὶ τοῦ καθόλου) instead of the nominative found in the other MSS, cf. *ibid.* I 7, 1098b3: “Of the starting-points (ἀρχῶν) some are envisaged by induction”.

<sup>195</sup> Cf. *Top.* VIII 1, 156a4-5; 2, 157a22-33, where the ins and outs of the epagogic procedure are described, including the correct categorization of the detected universal point (a 29-30: “You must try yourself to coin a name that will apply to all things of the given sort”); *APo.* II 19, 100b3; *EN* I 7, 1098b3-4.

<sup>196</sup> Caujolle-Zaslowsky (1990), 374, n. 19.

<sup>197</sup> Similar cases at *APo.* II 7, where the contradistinction of δεικνύναι and

The idea behind the opposition 'induction' to 'argument out of induction'<sup>198</sup> clearly comes to the fore in two chapters of *APr*. In *APr*. II 23 Aristotle does not discuss ἐπαγωγή properly speaking, but syllogisms using a universal that is obtained by induction (68b14-15). What Aristotle is trying to do in this chapter is to set the dialectical argument built on induction against the syllogistic schemes of *APr*.<sup>199</sup> He begins by explaining (68b15-21) that such a syllogism consists in stating syllogistically by means of a 'middle' (μέσον) that something falls to something else, e.g. showing (δείξαι) through C (e.g. 'being a particular long-lived animal') that A ('being long-lived') falls to B ('being bile-less'); for this is the manner, he says, in which we carry out inductions.<sup>200</sup> The point is that by seeing that property A belongs to every B (in Aristotle's example, 'being a man', 'being a horse', 'being a mule'), and that B also falls to every C, we become aware that A might concern a universal feature of the induced particulars that is commensurately linked up with B (68b21-24).

The pivotal point, of course, is the immediate ('without a middle') observation of commensurateness ('logical convertibility') of the properties A and B. But at the same time the syllogism built upon induction suffers from a weakness: who can warrant the logical convertibility of A and B? This embarrassment results from our uncertainty whether two conditions are fulfilled: (a) can the extensional identity of A and B be reasonably explained in terms of the formal relationship between these two; in other words, does 'being long-lived' have everything to do with 'being bile-less?', and (b) are the groups of particulars induced really representative of the class of long-lived animals? It will be plain that (a) is at the very heart of any epagógic procedure, while (b) is essential for accomplishing the move towards the universal.

Given the indispensability of the fulfillment of (b) it is quite understandable that Aristotle insists upon our making sure that the collection of the induced particulars represents the whole class of long-

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ἀποδεικνύναι is pivotal (as in I 1, and II 8-10; our sections 6.31 and 6.55-6.58); *Phys.* VIII 1, 252a24; *PA* II 1, 646a30; *Met.* A 9, 992b33; E 1, 1025b15; K 7, 1064a9.

<sup>198</sup> The phrase ἐπακτικοὶ λόγοι (*Top.* I 18, 108b7; *Met.* M 4, 1078b24) is used as a loose label for any argument springing from induction, including the syllogism prepared by induction. The distinction is clearly pointed out by Detel I, 249ff.

<sup>199</sup> Engberg-Pedersen (1979), 312.

<sup>200</sup> Lit.: "Thus we use (note the medium verb ποιοῦμεθα) the inductions". Therefore ἐπαγωγή indiscriminately stands for the preparatory epagógic process and the syllogism built on it; cf. 68b15.

lived animals (68b27-29): "We must grasp (νοεῖν) C as the class of all the particular species of bile-less animals; for induction proceeds through observing the whole range of things (διὰ πάντων)". It is commonly recognized that Aristotle cannot mean to say that we should observe all individual instances of men, horses, and mules, past, present, and future.<sup>201</sup>

Our passage makes the practice of the epagogic process, including its weak spot, crystal-clear: the detection of the universal feature in the induced particulars that is about to serve as the pivotal mode of being expressed by the syllogistic middle term, can be frustrated by the fact that condition (b) is not met. However, to make clear how a syllogism built on induction is prepared and carried out Aristotle only needs to state that the conditions should be met. Supposing this condition is actually met, we can faithfully use the extensional identity (observed by induction) of e.g. 'being without a gall-bladder' and 'being long-lived' to convert the original premiss, and thus frame a syllogism of the first figure yielding a universal conclusion.

That all Aristotle wishes to do in our passage is to explain the phenomenon of the syllogism built on induction and its conditions taken *in abstracto*<sup>202</sup> may appear from what he says elsewhere on this score. In point of fact Aristotle is not convinced that the class of long-lived animals does not include more than men, horses, and mules. At *APo.* II 17, 99b4-7, he expresses his doubts about the equation of 'being long-lived' and 'being without a gall-bladder', and suggests that while it may hold for quadrupeds, the long life of birds is rather due to their dry constitution or to some third cause. However, doubts such as these, he continues, should not keep us from using the aforesaid induction, because it suffices that "old writers said that the absence of a gall-bladder gave long life" (*PA* IV 2, 677a30-33). Such factual equations made by previous experts aptly support Aristotle's example in *APr.* II 23. It is interesting to see that both Aristotle's objection to the equation and his endorsing it *pour besoin de la cause* find support in the *PA* passage, where the author himself points out (677a33-b1) that other animals, which have no gall-bladder are also,

<sup>201</sup> Ross (1949), 486f.; Engberg-Pedersen (1979), 312f. For the use of the phrase καθ' ἕκαστον for single *species* see *APo.* II 13, 97b28-31.

<sup>202</sup> I agree with Engberg-Pedersen (313f.) that Aristotle is not talking in *APr.* II 23 about one species of induction (the putative 'perfect induction' wrongly assumed by e.g. Ross, 37; 50; 486; Guthrie VI, 188-90; Detel I, 251; 257; 260; 262), but about induction in general. See also my note 222.



as it happens, long-lived, but that the position of the old writers is still reasonable.

At the end of *APr.* II 23 Aristotle clearly assesses the syllogism springing from induction, which he had brought up at 68b15 by comparing it to the standard syllogism as discussed in the previous chapters. A syllogism by induction, he says (68b30-35), is the one that establishes the first and unmediable premiss; for where a middle (μέσον) is available the syllogism proceeds through the middle, but where there is not, through induction. And so in a way <the syllogism built upon> induction is opposed to the <normal> syllogism; for the latter shows (δείκνυσιν) through the middle that what is expressed by the major term to fall to what is expressed by the third term; while the former shows through what is expressed by the third term that it falls to the middle (not, of course, its own middle but that of the standard syllogism to which it is reduced). He finishes his exposition by claiming (68b35-37) that a syllogism by way of the middle is prior and more intelligible by nature, but the one by induction is more obvious to us. Hence the latter is the one that provides us with the major syllogistic premiss which itself cannot come about as the conclusion of a standard syllogism, since it cannot be, nor needs to be mediated.<sup>203</sup> Thanks to its universal character the standard syllogism is of a higher rank and more solidly known, but the syllogism by induction is ultimately built upon a universal immediately ('non-mediated') grasped from the particulars observed by sense-perception.<sup>204</sup>

A similar assessment of ἐπαγωγή can be gathered from the next chapter where (69a16-19) example (παράδειγμα) is contrasted with induction: It differs from induction in that the latter starting from all the individuals observed shows, as we saw (23, 68b27-29), that what is expressed by the major term falls to the middle, and does not apply the deduction to the other extreme [i.e. the minor], whereas (1) does make this application and (2) does not start from all the particular cases. In other words, the argument by example shows what it needs to show by means of a feature observed in one particular case, by suggesting that it is applicable to another particular case; while the argument by induction is based upon all the particular cases by grasping in the particulars induced a feature which is supposed to

<sup>203</sup> Cf. *APr.* I 25, 42a3; *APo.* I 1, 71a5.

<sup>204</sup> Cf. *APo.* I 2, 72b29 and I, 27; *Top.* I 12, 105a16-19; VIII 2, 157a18-21.

be universal and so apply to all (possible) cases. Unlike the argument by example, which is only a ‘one to one’ procedure, the argument by induction offers the universal feature as a middle to frame a syllogism leading to a broader conclusion, as can be gathered from the previous chapter, 68b15-36.<sup>205</sup>

From our foregoing discussions it may be clear that it is the argument from induction that is compared with other argumentative procedures (syllogism, example),<sup>206</sup> not induction as such. Hence the epagogic procedure recognized as a mere heuristic method of procuring a ‘universal point’ should be carefully distinguished from the syllogism springing from it.<sup>207</sup> As a matter of fact, Aristotle’s terminology concerning induction either alludes to our assuming or grasping a ‘universal point’ as a result of observing the particular(s) induced<sup>208</sup> or the epagogic procedure’s property of making something clear.<sup>209</sup>

Two more points need to be examined, viz. the persuasiveness of the ἐπαγωγή, and what we should understand by the ‘universal point’ the procedure is after. They will be dealt with in the next sections. But it is important to be aware beforehand that while the latter issue is only concerned with ἐπαγωγή taken as a heuristic procedure (2.56), the former is about the argument springing from it, not the heuristic device as such (2.55).

## 2. 55 *Persuasion only found in the ἐπακτικὸς λόγος*

As we saw in the previous section, *pace* Ross, modern scholarship rejects the idea that Aristotelian induction has any formal inferential force. This does not mean, however, that any persuasion should be

<sup>205</sup> Elsewhere the resemblances between example and induction (over against the standard syllogism) are discussed: *APo.* I 1, 71a9-10; *Rhet.* I 2, 1356b2-4; II 20, 1393a25-27.

<sup>206</sup> Likewise it is frequently marked off from ἀπόδειξις: *APo.* I 18, 81b1; II 7, 92a35ff.; *Phys.* VIII 1, 252a24-25; *Met.* A 9, 992b30-33; E 1, 1025b14-16; K 7, 1064a8-10.

<sup>207</sup> Induction as an epagogic procedure is also clearly assessed at *EN* VI 3, 1139b28-31: “Induction is about a starting-point, namely the universal, while deduction proceeds from universals. Indeed, there are starting-points from which deduction proceeds which cannot themselves be deduced, whence they are obtained by induction”.

<sup>208</sup> *APr.* II 21, 67a23-24; *Met.* Δ 29, 1025a9-10

<sup>209</sup> *Cat.* 11, 13b37; *Phys.* I 2, 185a13-14; *Carl.* I 7, 276a14-15; *PA.* II 1, 646a29-30; cf. *Met.* Θ 6, 1048a35-36; I 3, 1054b33; 4, 1055a5-6 and b17; 8, 1058a9; K 7, 1064a8-9; *EE* II 1, 1219a1-2; 3, 1220b29-30; IV 15, 1248b25-26; *EN* VI 3, 1139b27-29.

denied to the argument arising from it. This would not only be absurd but is also clearly contradicted by the texts.

In *APr.* II 21 the ins and outs of the epagogic procedure are demonstrated *ad oculos*. In criticizing the argument in Plato's *Meno* (81ff.) that learning is a matter of recollection, Aristotle describes (67a23-26) learning as a process of being led to see a universal point, as a result of which the learner obtains insight into the nature of the particulars induced, by an act, so to speak, of recognition, i.e. by seeing that they all satisfy the detected universal characteristic.<sup>210</sup> Likewise in *SE* 15, he says that in order to refute your opponent's thesis or arguments, when in dealing with particulars someone grants the individual case, you should not, after the induction has successfully led to considering the intended universal, put this universal as a question; instead you should take it for granted and make use of it, since your opponent himself may, while being aware of the induction just accomplished, suppose that he has actually already granted the universal point.

When in *Met.* Θ 6 he tries to explain the metaphysical pair 'actual being–potential being', Aristotle recommends (1048a31-b8) us to grasp their nature by inducing particular instances of actuality and potentiality. A similar procedure is applied at *EE* II 1, 1219a1-13, in order to establish the true sense of 'the best state or condition'. Elsewhere (*Rhet.* II 23, 1398a32-b19) induction is recommended as a basis for generalizing: e.g. from the case of the woman of Peparethus, who was well informed about her children's fortune, it might be argued (that is, by focalizing on her 'womanhood') that women everywhere can settle correctly the facts about their children.

At *APo.* I 18, 81b1-5, too, we find another clear assessment of the role of ἐπαγωγή, where Aristotle says (a) that induction depends on particulars, while epistemonik proof is based on universals, but (b) that it is only possible to grasp universals through induction. The passage is the more illustrative as Aristotle tries to make clear his intention by explicitly referring to the procedure of forming abstract concepts by subtraction (ἐξ ἀφαίρεσεως). Even then, he remarks, we

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<sup>210</sup> Incidentally, by looking at the universal characteristic of particular(s) in this way it no longer makes any sense to look for such a thing as 'perfect induction'. Engberg-Pedersen is quite right in rejecting (307; 311ff.) any idea of 'perfect induction' in Aristotle. Likewise it is the extensional equation of 'having no gall-bladder' and 'being long-lived' in *APr.* I 31 that releases us from the duty to exhaustively examine all classes of bile-less animals (past, present, and future!) in order to arrive at 'the universal point'.

can make people (including ourselves) familiar through induction with the fact that some things belong to respective kinds (even if these are not separable), in so far as each thing is such-and-such.

That the aim of induction is to produce insight into the universal characteristics of particular things becomes clear on many other occasions, for instance when it comes to establishing the proper nature and impact of contrariety (*Cat.*, ch. 11; cf. *Met.* I 3, 1054b33; 4, 1055a6 and b17; 8, 1058a9; *EE* II 3, 1220b30ff.). Likewise at *Phys.* I 2, 185a12-14, the fact that physicists must take for granted that the things that exist by nature are, either all or some of them at least, in motion is based on induction from observing particulars; and at *Cael.* I 7, 276a12-15, it is likewise claimed by induction that a place in which a thing rests or to which it moves unnaturally, must be the natural place for some other body. Similarly the formal difference between 'things being good' and 'things being praised' is grasped by induction in *EE* VII 15, 1248b16-26.

All things considered, Aristotelian ἐπαγωγή is meant to have a certain amount of persuasion. However, its persuasive force by no means equals formal evidence, but is merely factual evidence, so to speak. It is the amount of evidence that is in fact accorded by people to concrete cases or certain types of induction, and it counts as evidence only as long as it is accorded. That is why factual evidence can be frustrated by one sole piece of counter-evidence (ἐνστάσις).<sup>211</sup> At the same time it is quite understandable that any idea of assigning *formal validity* to the inductive procedure is out of the question.<sup>212</sup> Small wonder then that Aristotle claims (*Top.* VIII 2, 157a18-20) that while in discussions with people trained in dialectics deductive arguments should be used, it is rather induction that should be applied in discussions with laymen (πρὸς τοὺς πολλούς).<sup>213</sup> On the other hand, the inductive procedure is often recommended by

<sup>211</sup> *Top.* VIII, 2, 157a34-b33. At *Met.* Δ 29, 1025a6-13 Aristotle unmasks the misleading argument in Plato's *Hippias minor* (369B3-7) to the effect that one and the same man (viz. Odysseus) is both 'false' and 'true', by pointing out that it depends on a wrong assumption resulting from an inductive procedure that is erroneously carried out.

<sup>212</sup> Hamlyn (1976), 172ff.; Engberg-Pedersen (1979), 305f.; Detel I, 257-62, in particular.

<sup>213</sup> The common rendering 'the crowd' or 'the multitude' seems less appropriate. Cf. *Top.* I 12, 105a16-19: "Induction is more convincing and clear, and what it is after is more easily grasped by sense-perception, and the ability of inducing is shared by the majority of people, but deduction is more cogent and more efficacious against disputatious people".

Aristotle,<sup>214</sup> and one can raise the question, On what ground? The answer is: because of the πίστις ('trustworthiness') invested in it.

Every form of persuasion, Aristotle claims (*APr.* II 23, 68b13-14), depends either on the trustworthiness<sup>215</sup> of deduction or induction, as is indicated by Aristotle when he sets out to show the dialogical force of syllogisms springing from induction (ὁ ἐξ ἐπαγωγῆς συλλογισμός): "Whenever we have faith in an argument, we have acquired it either through deduction or on the basis of induction" (ἅπαντα γὰρ πιστεύομεν ἢ διὰ συλλογισμοῦ ἢ ἐξ ἐπαγωγῆς).<sup>216</sup> At *Top.* I 8, where it is shown that the devices that were later called 'praedicabilia' function in any kind of argument, this thesis is supported (apart from reasoning) by induction. This way of persuading (announced as μία μὲν πίστις ἢ διὰ τῆς ἐπαγωγῆς) aims to show that each and every premiss or problem contains a 'predicable' as its basic element, and this is illustrated thus (103b3-6): "If one were to examine premisses or problems (this holds good of any single one)<sup>217</sup> it would be clear that their subject matter is brought up either by its definiens or its property or its genus or one of its accidents". This common hallmark is called (103b1) a kind of 'sameness' to be detected in any premiss or problem you may adduce ('induce'). At *Phys.* V 1, 224b27-30 the πίστις ἐξ τῆς ἐπαγωγῆς is applied to finding the essential difference between coincidental and essential changes,<sup>218</sup> and at *Meteor.* IV 1, 378b12-26 this phrase is used for the empirical adstrution that some of the elementary qualities (namely the hot and the cold) are active, while others (the dry and the moist) are passive. At *Cael.* I 7, 276a14-15, Aristotle speaks of something being trustworthy on the basis of a particular case induced (πιστὸν ἐκ τῆς ἐπαγωγῆς).

The lack of formal inferential force is most typical of the position of the inductive procedure in Aristotle's strategy of argument: the familiarity with the universal (τὸ καθόλου) is acquired by intuition (νοῦς), and jumped upon, so to speak, as a result of someone's trust

<sup>214</sup> E.g. *Top.* I 12, 105a16-18; II 8, 113b17 and 29; 10, 115a5-6; IV 2, 122a19; 3, 123b7; VIII 1, 155b21-22 and 36; 156a4-7 and b14-16; 157a18-b33; *SE* 4, 165b27-28; *APr.* II 23.

<sup>215</sup> We should be aware of the etymological affinity between πίστις and πείθω.

<sup>216</sup> Bonitz, *Index*, 595b8-59, where πίστις is defined: "persuasionis firmitas, sive ea ex argumentis et rationibus, sive ex sensu et experientia orta est, atque eae res quae ad efficiendam eam persuasionem conferunt".

<sup>217</sup> For this distributive use of ἕκαστος see my *Index* s.v. I take the verbs occurring in the protasis and apodosis as potential optatives, meaning 'if perchance..., then it will turn out'.

<sup>218</sup> Cf. *Met.* K 11, 1067b14.

in the effectiveness of the procedure, not on the basis of a stringent reasoning. This ‘all of a sudden’ characteristic of intuitive cognition is also its weak spot: all it takes to disqualify it is just one counter-instance (ἐνστάσις).

This feature of ἐπαγωγή must bring to mind Plato’s doctrine about the acquisition of universal knowledge as expounded and argued for particularly in the *Meno* (81A-D). The soul became acquainted, Plato claims, with the universals (Plato’s transcendent Forms) before it entered the body, seeing “all things, both those here and those in the other world, and there is nothing it has not learned”. Seeing the imperfect particulars of our world the soul is reminded of their perfect paradigms, the Forms. By rejecting transcendent Forms Aristotle also dismisses Plato’s Recollection (ἀνάμνησις); instead he is forced to accept the *tabula rasa* idea. But when we see things which are all unstable, non-universal things — whether human beings, trees, moral acts, or mathematical figures — there is no way we can get even the slightest idea of the universality and stability required for genuine knowledge (ἐπιστήμη), however true it may be that men have a sufficient instinct for what is true, and usually attain the truth (*Rhet.* I 1, 1355a15-17). Given that the familiarity with the universals must be prior to any discursive knowledge (*APo.* I 1), there is only room for a faculty which can give rise to a stochastic<sup>219</sup> approach to the matter. Thus it makes sense to talk of stochastically (στοχαστικῶς) having a grip on truth and probabilities (*Rhet.*, *ibid.*).

Small wonder then that Aristotle himself likens (*APr.* II 21, 67a21-24) the sort of recognition (ὥσπερ ἀναγνωρίζοντας) he has in mind to Plato’s Recollection.<sup>220</sup> We directly attain familiarity with the universal, not by a discursive act of acquiring genuine knowledge, but by suddenly grasping, through an act of sensation, what precisely is going on.<sup>221</sup> We have at least two clear testimonies to this effect:

*APo.* I 31, 88a12-17: In some cases if we could see what happens we should stop inquiring, not because we know it by the act of seeing it,

<sup>219</sup> This notion mainly occurs with Aristotle in an ethical context: *EN* II 5, 1106b15 and 29; 9, 1109a22 (cf. *MM* I 18, 1190a27); *Probl.* XVIII3, 916b38. But, as we just saw, at *Rhet.* I 1, 1355a17 the adverb στοχαστικῶς is used in the context of rhetorical persuasion (1355a3-18), in which the enthymeme, as the rhetorical ἀπόδειξις, is called “the most efficacious of the modes of persuasion (κυριώτατον τῶν πείσεων), speaking generally”.

<sup>220</sup> Guthrie VI, 192.

<sup>221</sup> Guthrie aptly refers (VI, 193) to the contemporaneous and the historical usage of νοῦς and νόησις back to Homeric times.

but because we grasp the universal as a result of seeing it. For instance, if we could see the perforations in the burning glass, and the light streaming through, it would also be clear to us *why* it burns, through seeing each case individually and intuiting (νοῆσαι) at the same time that it is thus in every case.

*Ibid.* II 2, 90a26-30: If we were on the moon [when it suffered eclipse] we would seek neither if the eclipse comes about nor why, but it would be clear at once. For from mere sense-perception the universal would come to be known as well, since perception tells us that the earth is now blocking the sun's light, and from this the universal point would come about.

This noetic, sudden and instantaneous<sup>222</sup> cognition also has a momentous impact on the nature of what is indicated as 'the universal' (τὸ καθόλου).

## 2. 56 *On the 'universal point' aimed at by Aristotelian induction*

Most commentators explicitly say, or seem to tacitly assume that 'the universal' (τὸ καθόλου) obtained by the epagogic process concerns insight into a universal truth to be expressed in a universal proposition or 'principle'.<sup>223</sup> Engberg-Pedersen is more cautious and uses the vague label 'universal point', but at times (311; 318) he too seems to think of a 'universal proposition' or 'universal fact'.

No doubt, Aristotelian induction has much to do with acquiring universal truths, universal facts if you like, and thus has some connection with propositional knowledge. However this is not to say that there is no clear borderline between Aristotelian induction and

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<sup>222</sup> The fact that Aristotle sometimes speaks of recurrent sensation (*APo.* I 31, 88a2-5; II 19, 100a9ff.; *Met.* A 1, 981a5ff.) should not lead us astray. The repetition does not entail that each case contributes a part to the universal that is known at the end of the process as though there it were to finish a jigsaw puzzle; instead it contributes to the resulting instantaneous effect of suddenly grasping. Compare the way in which according to Plato "from much conversation and a life lived together" it is so that the truth flashes on the soul like a flame (*Epist.* VII, 341C-D). *Ibid.* 344B Plato speaks of the similar way in which "at long last, when names, descriptions, sights and other sense-impressions are rubbed together and tested amicably by men employing question and answer with no malicious rivalry, suddenly there shines forth insight (φρόνησις)". Guthrie V, 410. Caujolle-Zawlawsky (385f.) rightly emphasizes that to Aristotle, too, recurrence as such is not essential for there to be a grasp of the universal point.

<sup>223</sup> E.g. Ross (1949), 481-7; Hamlyn (1976), 173-8; 181f. Remarkably, Caujolle-Zawlawsky, who extensively argues (1990, 382-6) for the non-propositional nature of the 'universal point' (calling 385 ἐπαγωγή "le passage au genre"), first speaks (373) of "la perception mentale d'un universel, par exemple d'une règle [italics mine] applicable à tout cas particulier de même sorte".

the process by which knowledge of a universal truth is acquired. In the present and the next two sections I will argue for the thesis that ἐπαγωγή leads to grasping a universal characteristic as instantiated in the particular(s) induced, which may serve as the starting-point for a deduction leading to a universal proposition. Hence Aristotelian induction is *preparatory* to the acquirement of propositional knowledge, but is itself only concerned with knowledge by acquaintance, viz. of a universal nature immanent in the particular(s) induced.

Let us examine two cases in which the epagogic procedure is closely associated with the deductive process of acquiring universal knowledge. In the opening chapter of the *APo.* (71a21ff.) Aristotle is dealing with three instances of knowledge that together can be used to frame an expository syllogism reducible to the first figure, to wit (a) the pre-cognition ‘that every triangle is 2R’ (= ‘has its interior angles equal to two right angles’), (b) ‘that this figure inscribed in the semicircle is a triangle’, and (c) ‘that this figure in the semicircle is 2R’.<sup>224</sup> Aristotle’s point is that while one possesses (a) one is immediately able to state (b), i.e. identify the inscribed figure as an instance of the universal ‘triangularity’ without deducing this from its actually being 2R, but by observing that it is a mathematical figure “formed by three given straight lines” (*Lin. insec.* 970a9).<sup>225</sup> As a matter of fact, when it comes to acquiring epistemonik knowledge of the figure’s property of ‘being 2R’, the immediate (inductive) insight into the figure’s triangularity may serve as the middle for the epistemonik syllogism. Therefore, Aristotle concludes (71a27-29), the induction leads us to apply the universal knowledge, (a) to this or that concrete particular, which the possessor of (a) so far only knew in a way (potentially, that is), i.e. inasmuch as it is subsumed under (a); but genuine knowledge of the concrete triangle, it is implied, does not come about until a formal deduction has taken place. It is the induction that is indispensable for arriving at the expository syllogism which produces knowledge in the unqualified sense of this particular figure.

The existence of such differentiated knowledge can only make sense if the strict borderline between induction and deduction is mirrored by the opposition of the immediate knowledge by acquaint-

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<sup>224</sup> My section 6.31; Engberg-Pedersen (1979), 303, whose exposition of the passage is somewhat different from mine.

<sup>225</sup> Thus to Aristotle, ‘being 2R’ is a consequent to triangularity, rather than its definiens; *Met.* Θ 9, 1051a24-26.



ance of the universal nature to its functioning as the middle in the deductive process leading to universal propositional knowledge. What the preparatory epagogic procedure is all about is to successfully focus on a particular's special characteristic, and correctly categorize it in order to precisely have the right middle at hand to frame a syllogism or an argument in the form of a qua-proposition (see my section 2.7). The same feature comes to the fore in Aristotle's treatment of the famous 'knowledge-ignorance' item in *APr.* II, 21, where once again correct categorization plays the key role.

That induction leads to a 'flash of insight' into a universal point does not mean that whoever induces particular cases has no idea of the universal point before. Quite to the contrary, it is because he is somehow familiar with it that he is able to adduce particulars that are relevant in this respect, as is rightly stressed by Detel — in the wake of Friedrich Solmsen, for that matter — who speaks (I, 260; 295f.) of "der induktive Vorgriff auf das Allgemeine". In point of fact, at *APo.* I 1, 71a17-29, we find an explicit allusion to some precognition of the universal (my section 6.31). Likewise the cognitive capacity owing to which we become familiar with universal starting-points (*ἀρχαί*) cannot be explained as a purely mechanical process, but consists in already being orientated towards recognizing universal points in particulars. Aristotle has good reason to reject Plato's Recollection theory, just because he too retains the idea of recognition, which was indispensable for the Greeks.<sup>226</sup>

Insight into the universal point clearly counts as an instance of infallible knowledge, ruling out any idea of falsehood or deception, as appears from what Aristotle says about this matter in the concluding paragraph of the *APo.* (II 19, 100b6-7); for the universal is immediately grasped. At *An.* III 6, 430a26-b6, this kind of becoming familiar is clearly marked off from thinking by a process of combination (*σύνθεσις*), in which the possibility of failure is inherent.<sup>227</sup>

<sup>226</sup> *APr.* II 21, 67a24: ὥσπερ ἀναγνωρίζοντας. Likewise at *An.* III 1, 425a22-24, reference is made to recognition by the special senses of their proper subject in cases where these are part of common sensibles.

<sup>227</sup> Cf. *ibid.*, 430b28-30. Likewise at *EN* VI 6, 1141a3-8 the faculty yielding insight into universal starting-points is claimed to be infallible; cf. Detel I, 300f. Unfortunately, Detel seems to conceive of 'the universal' in terms of propositional knowledge; he continually speaks of 'premisses immediately known' and the like. — An interesting example of *ἐπαγωγή* by means of an analogon is found in *Met.* Θ 10, 1048a35-b9 (my section 11.11). In *Phys.* I, chs. 1-2 too, the search for the universal element in the particulars is pivotal; my section 12.3.

Fully in keeping with the basic tenets of Aristotelian thought, the universal point is grasped *as present in particulars*. Caujolle has good reason to connect (386) Aristotelian ἐπαγωγή with the Socratic pedagogic of obtaining definitions. Aristotle fully agrees with Socrates — to whom “two things may be fairly ascribed: inductive arguments and universal definition” (*Met.* M 4, 1078b27-29) — that the universal definiens should never be disconnected from the things in which what it refers to inheres. *Ibid.*, b30-31, we read: “But Socrates did not make them exist apart”; and at M 9, 1086b3-5: “Socrates gave the impulse <to look for the universal> by his practising definition, but he did not *separate* <the definientia> from the particulars, and in this he thought rightly, in not separating them”.

## 2. 57 *Example* (παράδειγμα)

The word παράδειγμα (‘example’) is used by Aristotle in several senses, all deriving, it seems, from the focal meaning ‘pattern’ or ‘model’. One sense is ‘formal cause’. It is found in the *Lexicon*, *Met.* Δ 2, 1013a26-27 (= *Phys.* II 3, 194b26), where it is naturally juxtaposed to εἶδος. It is, so to speak, the secularized variation of the Platonic sense of ‘Exemplar’, in which sublime sense it is used (as in Plato) of the transcendent Forms.<sup>228</sup>

The connotation of ‘being informative of something of the same kind’s nature because of a certain analogy between the two’ is part of the focal meaning.<sup>229</sup> At *EN* VIII 12, 1160b22-30, paternal rule as functioning in households is compared to patterns (παράδείγματα) of leadership found in several constitutions, such as monarchy or tyranny. At *Plant.* I 4, 819b14-16, we read: “We can only find out all those interesting details by reasonings and examples and descriptions”.<sup>230</sup> Likewise at *Top.* VIII 1, 157a14-17 it is recommended for clearness of argument to adduce examples and comparisons, that is to say, examples that are to the point and drawn from things familiar to us, of the kind which Homer uses; for thus the point proposed will be rendered clearer. At *MM* I 1, 1183a24-28, the author argues against the ‘obscurum per obscurius’ method: “Obviously (ἴσως)

<sup>228</sup> *Met.* A 9, 991a21-31; M 5, 1079b25 and 35.

<sup>229</sup> When παράδειγμα has the plain sense of ‘illustration’ or ‘exemplification’ given just to make clear the speaker’s intention, the focal meaning is nearly reduced to nothing. E.g. *Rhet.* I 5, 1360b7-8; *Poet.* 25, 1460b26.

<sup>230</sup> Cf. *Rhet.* I 9, 1366a32-33.

when one wishes to make something clear (δεικνύναι), one should not use examples that are not manifest, but avail oneself of what is manifest for the clarification of what is obscure, or of the things of sense (τοῖς αἰθητοῖς) to clarify the things of mind (τῶν νοητῶν); for the former are more manifest. Whenever, therefore, you undertake to speak about what is good, it is of no use to speak about the Idea”.

Despite the fact that it has its advantages, Aristotle is sensitive enough to the weak spot of presenting analogies. For while, for example, medicine and gymnastics and many other arts have departed from traditional usage with good results, none the less you should not use these examples to argue for changes in lawgiving, since changing laws is quite a different thing. Therefore to adduce examples from the arts is mistaken: a change in a law has no resemblance with a change in art (*Pol.* II 8, 1269a19-20 *juncto* 1268b34-38).<sup>231</sup>

Three resemblances in these uses must strike the reader:

- (a) As the word already suggests, παράδειγμα ‘exhibits side by side’; it reveals something by using something that is better known.
- (b) It reveals something by disclosing a certain point that is suggested may be present in both the thing adduced as an example and in what the example is meant to clarify.
- (c) The suggested analogy may be mistaken or at least objectionable, and thus the suggestion will turn out to be ineffective.

Coming now to Aristotle’s theoretical treatment of the logical (and rhetorical) tool, παράδειγμα, the first thing to be emphasized is that it stands for the argument from example, rather than the adducing of examples as such. In this respect it resembles its counterpart, ἐπαγωγή.

As a matter of fact, Aristotle puts παράδειγμα alongside ἐπαγωγή; sometimes he contrasts them, sometimes he shows their resemblance. As we saw before, in *APr.* II 24 the two are opposed in order to throw light on the specific nature of the argument by induction. At *Rhet.* II 20, 1393a26-27, the argument by example is said to resemble that by induction, and induction is claimed to be its foundation. At *Rhet.* I 2, we find a somewhat broader assessment of the two in the context of persuasion:

<sup>231</sup> Cf. *ibid.* III 16, 1287a32-34; *GA.* IV 4, 772a22-25. In *Rhet. Alex.* ch. 8 there is an extensive discussion (1429a27-1430a13) how to employ (or reject) examples, both those that are in accordance with people’s expectations (κατὰ λόγον) and the ones that are contrary to them (παρὰ λόγον).

*Rhet.* I 2, 1356a35-b17: With reference to the tools operating through proof or apparent proof, just as in dialectic there is induction on the one hand and deduction or apparent deduction on the other, so it is in rhetoric: the example is an induction, the enthymeme a deduction, and the apparent enthymeme an apparent deduction. (I call the enthymeme a rhetorical deduction, and the example a rhetorical induction.) Everyone effects persuasion either through proof, or by using examples or adhibiting enthymemes; there is no other way. And since in general everyone who shows something must use either a deduction or an induction (this is clear to us from the *Analytics* [*APr.* II, chs. 23-24; *APo.* I 1; II 5]), it is necessary that enthymemes are deductions and examples are inductions. The difference between example and enthymeme is plain from the *Topics* [I chs. 1 and 12]. There it was already said on account of deduction and induction that exhibiting something on the basis of a plurality of similar cases that something is so-and-so, this is induction in dialectic, example in rhetoric; when, on the other hand, some things being the case, through them some other thing follows by the mere fact that they are the case [...], this is called syllogism in dialectic, enthymeme in rhetoric.<sup>232</sup>

The argument from example is defined at *APr.* II 24, 68b38-39: "We have a case of <an argument by> example when what is signified by<sup>233</sup> the major term is shown to belong to what is signified by the middle term by means of a mode of being that resembles the one signified by the third term".<sup>234</sup> For instance let A stand for something evil, B for making war against neighbours, C for the Athenians making war against the Thebans, and D for the Thebans making war against the Phocians. If you then wish to show that to make war with the Thebans is an evil, for the argument to proceed correctly one must know (or assume, at least) that to make war against neighbours is an evil, and evidence of this is obtained from similar cases, e.g. that the war against the Phocians was an evil to the Thebans. By identifying the nature of this evil as 'making war against neighbours', you can make clear that likewise to fight against their neighbours, the Thebans, must be an evil to the Athenians (68b39-69a11).

Clearly this argument is built on stating a resemblance between particular cases consisting in some common characteristic, which is determined as an instance of something καθόλου.<sup>235</sup> By considering

<sup>232</sup> Cf. *Rhet.* II 20, 1393a24-25.

<sup>233</sup> Note that always the neuter forms τὸ ἄκρον, τὸ μέσον etc. are used, not the masculine ὁρὸς ἄκρος etc.; my section 6.52.

<sup>234</sup> Cf. *Rhet. Alex.* ch. 32, 1439a1-4.

<sup>235</sup> Cf. *Rhet.* I 2, 1357b25-30; II 25, 1402b16-18; *Rhet. Alex.* ch. 33, 1429a21; cf. *APo.* I 1, 71a5-11, esp. a8.

(1949, 488) the argument by example a combination of two inferences, Ross failed to see that it is merely a weaker form of the argument by induction, and, like its counterpart, is built on discovering (or stating, at least) a common characteristic. It is this characteristic that is to bear the entire *onus argumentandi*.

*Pace* Ross (*ibid.*), generalization plays a pivotal role in this argument too, since the inducing of a particular belief consists in drawing the particular suggestion about a particular case (e.g. the evil of the Athenians' fight against their neighbours, the Thebans) from the general one (concerning the evil of fighting against one's neighbours). The resemblance with the argument by induction should be seen in the same context,<sup>236</sup> and likewise the difference, which merely lies in the diverse ways of founding the universal point.<sup>237</sup>

Concluding this section we should stress the fact that when taken by themselves both ἐπαγωγή and παράδειγμα are just heuristic devices, and do not have inferential force of their own. The 'universal point' they can detect still needs to be employed in its capacity of providing a medium that can be applied to frame a deductive argument of more or less stringency.

## 2. 6 *The role of categorization in Aristotle's strategy of argument*

Aristotle's strategy of argument pivots around finding the appropriate terms to assemble a proof, since, in his view, a question can only be answered in so far as the object under examination and its properties are brought up under the appropriate descriptions.<sup>238</sup> This leads Aristotle to concentrate on correct categorization.

### 2. 61 *Categorization at work in APr. II 21*

In *APr.* II, ch. 21, we find a passage (67a8-26) that runs closely parallel to the previously (2.55) discussed passage of the opening chapter of *APo.* (I, 71a17-30). The chapter deals with the question how ignorance of a conclusion can coincide with knowledge of what is said in its premisses. The problem is dealt with in the context of seeming

<sup>236</sup> *Rhet.* II 20, 1393a26-27; cf. I 2, 1356b2-15; *APo.* I 1, 71a9-11.

<sup>237</sup> *APr.* II 23, 69a13-19.

<sup>238</sup> Cf. Kirwan (1971), 76; De Rijk (1980), *passim*; (1988), *passim*; (1995), 78-81; 84-102; my present sections 6.55-6.58.

contradiction: there are various cases in which it seems as if someone at the same time *both* knows *and* is ignorant of the same thing. The problem is addressed thus:

*APr.* II 21, 66b18-26: It sometimes happens that just as we are deceived in the arrangement of the terms [cf. I, 32-44], so error may arise with reference to their application (κατὰ τὴν ὑπόληψιν).<sup>239</sup> I mean this: if it is admissible that the same <attribute> belongs to several substrates commensurately (πλείοσι πρώτοις),<sup>240</sup> it happens that someone at the same time (καὶ ... καὶ) is not aware of one case and even thinks that it [this attribute] does not fall to any instance of that substrate, but does know the other case. Take <the attribute> A belonging to B and to C in virtue of their nature (καθ' αὐτὰ ὑπάρχον), and suppose that these two fall to every instance of D in the same essential way. If then this man thinks that A belongs to B in every instance, and B to <something><sup>241</sup> which is D, but A to no C and C to all D, he will have a state of knowledge *and* ignorance about one and the same substrate [viz. D] with reference to the same attribute [viz. A].

What Aristotle has in mind is the case in which someone actually knows that an attribute A falls to a particular substrate D through the 'middle' (τὸ μέσον),<sup>242</sup> B, but by ignoring this denies A of all D through erroneously applying a middle C to the particular D under examination. For example, a fisherman catches a marine animal unknown to him, and sees that it is gilled; by using the middle 'being gilled' he comes to know that it is a fish, since, he (correctly) thinks, every gilled animal is a fish. His companion, a biologist, brings it home to him: "Man, it is a sea-horse (ἵππόκαμπος)"; our fisherman becomes confused and thinks, quite correctly indeed: no horse (ἵππος) is a fish, and through the middle 'being a horse' he no longer takes the animal in question to be a fish.

Ross among other interpreters (e.g. Tricot *ad loc.*; Mignucci 1969, 690), thinks that the error involved (which is described as κατὰ τὴν ὑπόληψιν) is due to belief in a false proposition. He claims (476) that

<sup>239</sup> For ὑπόληψις = 'assumption', 'adoption', 'application' see below, and my *Index*, svv.

<sup>240</sup> For this use of πρώτος see below, and *APo.* I 19, 81b31 and 35; II 16, 98b27; my *Index*, s.v.

<sup>241</sup> The quantifier παντί is conspicuously missing here, which Ross failed to see (1949, 473), whereas in their translations Tricot and Mignucci rightly omit it, but in their explanations have (Tricot, 298, n. 4; Mignucci, 688) 'universal quantification'. One should be aware, however, that 'D' stands for one particular substrate under discussion, not an entire class.

<sup>242</sup> For the technical difference between 'middle' (μέσον) and 'middle term' (ὅρος μέσος) see my section 6.52.

the general problem is, “in what conditions belief in a false proposition can coexist with knowledge of true premisses which entail its falsity, without involving the thinker’s being in two opposite states at once”. I rather think the error consists not in framing a wrong proposition, but in an erroneous categorization of the object under examination: no horse is a fish, true enough, but our sea-horse should not be identified and categorized as a horse.

Another case of erroneous categorization and false identification of a particular is discussed at 67a8ff. It resembles the cases, Aristotle says, in which universal quantifications are erroneously applied. This time the universal premisses are all right, but the particular thing under examination is not recognized as an instance of a certain universal:

*Ibid.*, 67a8-16: The error of the former kind resembles the one concerning knowledge about particulars. Take for instance the following case. If A belongs to all B, and B to all C, A will belong to all C. If then someone is aware that A belongs to everything to which B belongs, he is also aware that A belongs to C. But nothing prevents him from not knowing that there actually is an instance of C (τὸ ὅτι ἔστιν)<sup>243</sup> [viz. the particular under discussion]. For example, let A stand for ‘being 2R,’ B for ‘being a triangle,’ and C for a concrete diagram of a triangle (αἰσθητὸν τρίγωνον).<sup>244</sup> Someone might assume then (ὑπολάβοι γὰρ ἄν τις) that the substrate under examination is not C, still knowing that every triangle is 2R, so that he at the same time will have knowledge and ignorance about one and the same thing.

Ross (476) accuses Aristotle of not distinguishing “between (1) not knowing that the particular figure exists, (2) thinking it does not exist, (3) not knowing that the middle term is predicable of it”, and concludes that Aristotle thus “fails to distinguish two situations, (a) that in which the particular figure in question is not being perceived, and we have no opinion about it (expressed by (1)), (b) that in which it is being perceived but not being recognized to be a triangle (expressed by (3))”. The distinctions made by Ross are ingenious enough but simply not to the point in this context. In fact he failed to see that the entire passage primarily concerns categorization mistakes, not false sentences. So the supposed someone (in 1) does know that the particular figure exists (but fails to recognize it to be a

<sup>243</sup> For this interpretation see my sections 6.55-6.57.

<sup>244</sup> The appellation ‘triangle’ is used here denotatively for a mathematical figure which is in fact a triangle, but might not be recognized by someone in its proper nature and thus might be wrongly categorized.

C); (2) he does not think it does not exist; but ... (see previous point), (3) he only fails to observe which intermediary notion expressed by the middle term (briefly, 'the middle') is applicable to the particular, and which is not; and this is what leads him to an erroneous categorization, so that the man well knows that, say, every triangle is 2R, but is not aware that the object at hand is a triangle, and, consequently, fails to know that the property of being 2R belongs to it.

In order to clear up this situation, and to show that there is no contradiction involved, Aristotle goes on to point out that a man's 'knowing that every triangle is 2R' is an ambivalent expression (in Aristotle's words "is not single"), bearing both on universal knowledge ('Knowing of any (actual or possible) [x]: if [x] is a triangle, it is 2R') and extensional knowledge ('Knowing of any particular [x] I recognize to be a triangle that it is 2R'). Once again, the correct categorization is pivotal, and the possible ignorance is a result of an erroneous one:

*Ibid.*, 67a16-21: For the expression 'to know that every triangle is 2R' is ambivalent (οὐχ ἀπλοῦν), meaning on the one hand 'knowledge based upon the possession of universal knowledge' and 'knowledge concerning particulars', on the other. Therefore (οὖν) seeing it thus (οὕτω) <it follows that> with his universal knowledge the man knows that C is 2R, but not with his particular knowledge. Hence he will not <actually> possess two opposite instances of knowledge.

Incidentally, the aforesaid twofold sense does not imply sheer ambiguity, since to Aristotle, universal and particular knowledge are not mutually opposed: although a man's universal knowledge can coexist with his ignorance concerning particulars, genuine knowledge (ἐπιστήμη) of a particular can only take place by recognizing it as an instance satisfying a universal nature. That is why Aristotle now (67a21-26) comes to criticize the argument in the *Meno*<sup>245</sup> that learning is recollection, as if a man starts with a foreknowledge of the particular. On the contrary, "simultaneously with our being led on to seeing the universal principle we acquire knowledge about particulars, by an act, so to speak, of recognition (67a23-24: ὥσπερ ἀναγνωρίζοντας)",<sup>246</sup> and "by a knowledge of the universal we see the particulars" (67a27).

<sup>245</sup> Plato, *Meno* 80D; cf. *APo.* I 1, 71a29ff.

<sup>246</sup> A similar use of the pair ἐπαγωγή and (ἀνα)γνωρίζειν is found at *APo.* I 1, 71a17-21.



Next the categorization mistake is further explained (67a26-b11) in the context of the ‘universal-particular’ item. It is true, the argument runs, we *know* particulars in light of their universals, but in this way we do not become familiar with precisely their being *qua* particular. Hence mistakes are still possible, if we catch them, that is, in their particularness but without grasping their proper nature. Again, this mistake does not imply contradictory states of knowledge; for the error committed with reference to the middle (since it is a result of an erroneous *categorization*) does not entail a *propositional* view that would contradict the universal knowledge involved in the deductive procedure, nor is this the case with the assumption made through the application of one or the other middle (ἡ καθ’ ἐκάτερον τῶν μέσων ὑπόληψις). Then follows an observation similar to the one before:

*Ibid.*, 67a33-b3: However, nothing prevents a man who is aware (εἰδότης) *both* that A belongs to the whole extension of B (ὅλῳ τῷ B) *and* that again B belongs to C, from thinking that A does not belong to <this particular> C. For instance, <being aware> that every mule (B) is sterile (A) and that this is a mule, <nothing prevents him from> thinking that she [my C] is pregnant (not-A); for he does not *know* (οὐ γὰρ ἐπίσταται) that A belongs to C, unless he considers the two observations together;<sup>247</sup> hence it is clear that if he is aware of the one and not of the other he will likewise<sup>248</sup> fall into error. And this is how instances of universal knowledge relate to particular instances: we know no sensible thing after it has passed beyond the range of sense-perception — not even if we happen to have perceived it — except at the level of the universal, provided this goes together with acquiring the kind of knowledge that is appropriate to the particular (τὴν οἰκείαν ἐπιστήμην)<sup>249</sup>, albeit without the actual exercise of that knowledge.<sup>250</sup>

The concluding remark about actual knowledge leads Aristotle to point out another useful distinction between the different ways of knowing. What he has in mind is clear enough from the context, but his manner of expression, as often, is rather elliptical:

*Ibid.*, 67b3-5: We speak of ‘knowing’ (τὸ ἐπίστασθαι) in three senses: either as bearing on (1) universal knowledge, or (2) knowledge

<sup>247</sup> I.e. he can only genuinely *know* that A belongs to C by bringing the two observations ‘Every B is A’ and ‘C is a B’ together and concluding ‘C is sterile’. This genuine knowledge resulting from the universal premiss will prevent him from assigning pregnancy to C.

<sup>248</sup> Ross rightly has (472; 474): *a fortiori*.

<sup>249</sup> This kind of knowledge depends on correct categorization.

<sup>250</sup> Otherwise the deductive procedure starts from the actual knowledge of what is concluded.

appropriate to the particular qua particular instance of the universal (ὡς τῇ οἰκείᾳ, sc. ἐπιστήμῃ); or (3) there is a distinction bearing on the actual <or non-actual> exercise <of the act of knowing>. Hence the expression 'to be mistaken' (τὸ ἡπατήσθαι) is used in as many senses.

What Aristotle mentions is, properly speaking, only three different ways of knowing (ἐπίστασθαι), not three different ἐπιστήμαι, as if apart from the two aforesaid ones, viz. (1) of a universal truth (ἡ καθόλου ἐπιστήμη), and (2) of a particular truth (ἡ καθ' ἕκαστον ἐπιστήμη), there were a third one (to be labelled: \*ἡ τῷ ἐνεργεῖν ἐπιστήμη), as Ross takes Aristotle to claim.<sup>251</sup> In fact, Aristotle only seems to indicate that the first two types of knowing (τὸ ἐπίστασθαι) can occur either with or without actual awareness of the particular being an instance of the universal nature the general knowledge is about; *pace* Ross, who thinks (474f.) Aristotle is talking about the perceptual awareness we already had of a particular, and which has now passed out of our ken. It is not the particular itself that is out of our ken, but our awareness of its satisfying the mode of being signified by the term, which (mode) could serve as middle (μέσον) in the intended syllogism, a syllogism indeed that could have prevented us from falling into error. Aristotle then points out that the number of possible errors matches these different kinds of awareness.

The reader is now somewhat better equipped to see that the example about the sterile mule that is thought to be with foal does not support the erroneous idea that to know 'p' but to think 'Not-p' at the same time should imply a contradiction. It is true, nothing prevents a man from both knowing and being mistaken about the same thing, but these two states of mind need not be contrary; the previous discussion of the aforesaid cases (66b18-67a26) all make this clear. The same holds, Aristotle continues, of the case of the sterile mule:

*Ibid.*, 67b7-11: This happens also to the man who is familiar <with the object under examination> with reference to each of the two premisses, but without previously having made the right observation.<sup>252</sup> For assuming that the mule in question is pregnant he has not the actual knowledge <about this particular too belonging to the extension of

<sup>251</sup> Ignoring the τῷ at 67b3 and 5 (after the twofold τῇ (sc. ἐπιστήμη) at 67b4), Ross (1949, 474f.) takes Aristotle to speak of a third kind of ἐπιστήμη alongside the two others. However, what Aristotle calls τὴν κατὰ τὸ ἐνεργεῖν ἐπιστήμην (67b9) is merely a modification of the knowledge of the particular called ἡ οἰκεία ἐπιστήμη.

<sup>252</sup> I.e. observing that the particular under discussion belongs to the extension of the middle term and, accordingly, shares the universal nature in question.

the universal in question> at his disposal. Nor on the other hand is it the case<sup>253</sup> that as a result of this assumption the mistake is contrary to his knowledge <of the universal truth>. For the case of an error being contrary to the universal knowledge only<sup>254</sup> lies in a deductive procedure actually accomplished.

It can be gathered from this rather elliptical passage that the error under examination concerns true knowledge about particulars in the light of a universal truth, and time and again consists in failing to perform the cognitional procedure *in toto* as described at 67a23-24; a27-28; a39-b3. That is to say, in order to acquire genuine knowledge of the particular, the universal knowledge containing the general truth about the total collection of particulars needs to be applied to each of these particulars, and appropriated (or, as it were, earmarked) to the particular under examination, so that this instance of knowledge becomes genuine knowledge of this particular (οἰκεία ἐπιστήμη). The error under discussion consists in omitting the final, decisive step of actually identifying the particular as belonging to the collection the universal truth is about, and thus leaving the knowledge of the particular at its potential level, or in Aristotle's words (67b3 and 5): "without being actually exercised". It is by a syllogism that the act of genuinely *knowing* the particular is completed, since to frame a syllogism includes the indispensable "considering the two observations together" (67a37). It is not until we have framed an (erroneous) syllogism that the coexistence of knowing a universal truth and thinking its opposite on the particular level can become a real inconsistency (67b11).

The chapter winds up (67b12-26) with a tentative (see b23-26) discussion of a cognate matter concerning the formal predicative relationships between universal quiddities, such as those of good (τὸ ἀγαθὸν εἶναι) and bad (τὸ κακὸν εἶναι). As far as I can make something of this cryptic passage,<sup>255</sup> the problem at issue is that someone may take an instance of badness (C), e.g. 'doing good to his friend's enemies' (which may seem to be something bad), to be something good (A, i.e. qua instance of 'doing good'), which leads him to actually think or opine that what is bad ('badness') is what is good

<sup>253</sup> Supplying συμβαίνει from 67b7.

<sup>254</sup> For the frequent omission of μόνον in Greek see Verdenius (1981), 348; 351. Other examples: *APr.* II 15, 63b26-27 ("In reality, however, there are *only* three"); *Top.* III 4, 119a7.

<sup>255</sup> The exemplification is mine; Ross's paraphrase (472) is as vague as Aristotle's text.

(‘goodness’). However, Aristotle eventually doubts whether you can truthfully say that a man can really think ‘being good’ is ‘being bad’, since such concrete establishments of ‘things being the same’ are made on the basis of coincidental sameness (κατὰ συμβεβηκός), and thus do not entail someone’s actually putting such opposite things on a par καθ’ αὐτό, i.e. by identifying the opposite quiddities goodness and badness by themselves. The question deserves more treatment, Aristotle thinks. It surely does.

## 2. 62 *Again, the proper nature of the ‘universal point’*

From my previous analysis of *APr.* II 21 it is plain that to obtain genuine knowledge of a particular one must identify it as satisfying a certain universal nature,<sup>256</sup> and accordingly categorize it — to bring it up, that is, under the corresponding special name (designation). As I stated in the preceding sections, it is ἐπαγωγή that is concerned with uncovering the particular’s universal nature in question. Hence as far as the epagodic process goes, it is all about suddenly recognizing and getting acquainted with some thing’s being, while any idea of assigning to the object some attribute by framing a statement is out of the question. And quite understandably so; for the fact that insight is obtained all of a sudden, which is so characteristic of the epagodic process, seems to rule out in principle any idea of composite constructs like assertions.

That the ‘universal point’ (τὸ καθόλου) contains the proper ‘because’ required for effectively framing an epistemonical proof is frequently claimed or implied by Aristotle.<sup>257</sup> Now in its primary sense the phrase τὸ καθόλου stands for a state of universally applying.<sup>258</sup> Thus ‘being a man’ and ‘being an animal’ are presented as examples of τὸ καθόλου (generic mode of being, i.e. with respect to fatherhood) at *GA* IV 3, 768a13.<sup>259</sup> In *APo.* II 13 the universal looked

<sup>256</sup> Cf. *Top.* VIII 14, 164a8-11; *EN* VI 3, 1139b29; *Met.* M 9, 1086b5-6.

<sup>257</sup> E.g. *APo.* I 5; 11, 77a7-8; 18, 81a40b1; 24, 85b24-26; 31, 87b28-88a7; cf. *APr.* II 16, 64b32-33; *APo.* I 6, 75a29-31; 7, 75a39-b3; *Top.* I 1, 100a27-29; *Met.* B 2, 997a7-13.

<sup>258</sup> E.g. *Int.* 7, 17a38-b5; *APo.* I 4, 73b26-74a3; II 17, 99a33-34; *Met.* B 4, 1000a1; Δ 9, 1017b34-35; Z 13, 1038b6-12; *PA* I 4, 644a25-28. In a similar vein the phrase is often juxtaposed to τὸ κοινόν, or τὸ γένος (Bonitz, *Index* 356b20ff.); or τὸ εἶδος, e.g. *Met.* Z 10, 1035b34-1036a2; 11, 1036a28-29; 13 *passim*; 16, 1040b26-30; Θ 7, 1049a27-30; I 2, 1053b16-19.; M 3, 1077b17-18; 4, 1078b30-31; 9, 1086a32-34.

<sup>259</sup> Cf. *ibid.* b13 and 769b13 and *GA* I 21, 729b9-21. Likewise at *Phys.* III 3, 202b23, the *eidos* ‘motion’ is indicated by the use of καθόλου. Cf. *Met.* Δ 9, 1017b35; 11, 1018b33; K 1, 1059b26; 3, 1060b32-33; *EN* III 2, 1110b32-33; *Rhet.* II

for is high-mindedness or being high-minded, the issue not being any statement about high-minded persons like Alcibiades, Achilles, Ajax or Lysander and Socrates, but the characteristic common to them.

To grasp the 'universal point' is as such nothing to do with statement-making, as is clear from what Aristotle in *APo.* II 19 claims about picking out the universal in perceptual configurations. The same can be gathered from Aristotle's discussion of non-discursive thought in *Met.* Θ 10, 1051b17-1052a4.<sup>260</sup> In point of fact, to grasp the universal boils down to subtracting<sup>261</sup> a particular mode of being from a compound (σύνολον), i.e. taking it away from the hypokeimenon it actually inheres in.<sup>262</sup>

## 2. 7 *Categorization and the use of the qua-locution as its main device*

The aim of this section is to elucidate the pivotal role focalization and categorization play as *the* devices for simultaneously subtracting an object's universally applicable (either substantial or coincidental) mode of being *and* retaining its being enmattered as a particular form in this or that particular. To construct an appropriate proof a special mode of being is required to serve as 'universal point', namely the one commensurate to the intended attribute, in fact the 'middle' (τὸ μέσον, expressed by the middle term, ὅρος μέσος) which mediates between the substrate and the attribute.<sup>263</sup>

19. 1393a17-18; *An.* II 5, 417b23.

<sup>260</sup> Cf. *An.* III 6, 430b28-30; my section 11.4.

<sup>261</sup> I use 'subtracted' (as opposed to 'abstract') because the latter label may suggest some idea of Platonic transcendence, having no reference to material constitution. Thus my use of the term may be compared with the way in which photographers talk of 'subtractive process', in which all but the desired colours are removed by filtering them out, without disguising their presence in the picture as a whole. Likewise, subtraction of the universal does not affect its being enmattered in *this* or *that* concrete instance. Note that also in the *Topics* (which is a handbook of Academic dialectic) the process of subtraction is often linked up with the Aristotelian idea of the things' being materially constituted. See e.g. *Top.* III 3, 118b17-19; 5, 119a22-26. Cf. *PA* I 1, 641b10-12.

<sup>262</sup> Pace Cleary (1994, 304), who holds that it is the hypokeimenon which is taken away. See *Met.* M 2, 1077b9-11, where Aristotle claims that the result of subtraction (τὸ ἐξ ἀφαιρέσεως) is not prior to the compound (τὸ ἐκ προσθέσεως). See also my section 11.52 in Vol. II.

<sup>263</sup> It should be stressed time and again that categorization nearly always functions in the context of an investigator's or interlocutor's focalization on an object's special mode of being, namely the one that is pivotal for the discussion at hand, no matter if it is by itself essential or accidental to the subject as such. Thus συμβεβηκότα are things that are modes of being incidental from the point of view the

It will be shown that the qua-procedure is the prominent way of bringing the middle into focus, while the inferential structure of this procedure — as far as it is strictly epistemonik (ἀποδείξις), at least — can be ‘analysed’ by expanding it into a syllogistic construct in which the middle is represented by a middle term, which has a ‘said of’ (or ‘denied of’) relation to the major and/or the minor term, in particular operating in the protagonists of the first figure, *Barbara* and *Celarent*.

## 2. 71 *Particulars as the ultimate objects of epistemonik proof*

While Aristotle never tires of repeating the common Greek thesis that genuine knowledge (ἐπιστήμη) is about the universal (τὸ καθόλου), as opposed to the object of sense-perception, which is singular or particular being (τὸ καθ’ ἕκαστον),<sup>264</sup> he never opposes the universal to the particular as strongly as Plato does. He is fully aware that without the universal there is no genuine knowledge at all, but unlike Plato he sees no need, and no use either, for it to have a transcendent status outside our world. Quite the contrary indeed: no universal can exist without being enmattered in a particular. Since, on the other hand, any particular being exists owing to immanent instantiations of natures universally applying to other particulars, Aristotle (*APo.* II 19, 100a16-b1) can claim that although it is the particular that we perceive, sense-perception “is of the universal, for instance, of man, not just Callias, a man”; that is to say, it is Callias *qua man* who is perceived. Aristotle’s philosophic stand is, of course, not free of inner tension. He has to disentangle an intriguing problem: given that the proper object of genuine knowledge is a universal nature, and everything real is an individual existing in this world, how are we to obtain genuine knowledge of it *in its own right*?<sup>265</sup>

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investigator has in mind. Cf. Cleary (1995), 321.

<sup>264</sup> See e.g. *An.* II 12, 424a18-24. This should often be understood, however, in terms of material constitution, rather than this or that particular concrete thing sensed; cf. *An.* III 2, 425b12-426a15.

<sup>265</sup> This complex ontic situation (‘particularness’ vs. ‘universality’) is succinctly described in Guthrie VI, 102-4; and critically evaluated by Ackrill (1981), 96-9; cf. Detel II, 197-202, who rightly emphasizes (I, 305f.) the fact that in accordance with his basic metaphysical lore of the priority of the particular, Aristotle’s epistemonik theory focusses on particular being. He refers to *APr.* I 33, 47b15ff.; II 24, 68b38ff.; 27, 70a11ff; *APo.* I 11, 77a5ff.; 13, 78b29ff.; 34, 89b13-15; II 11, 94a37ff.; 15, 98a30ff. This will be extensively discussed below; my sections 9.11; 9.42 and 9.46; 9.52 and 9.64; 9.61 and 9.63-9.64; 9.71; 9.74; 10.74. See also *Top.* VIII 14, 164a8-11: “All parti-

In this context it is useful to highlight one distinctive feature of the Aristotelian epistemonik procedure. Availing ourselves of Ackrill's (1981, 102) pertinent characterization of this procedure as a "movement from a rough idea to a full understanding of what some kind of thing or type of event is" we are in a good position to realize that to Aristotle, every epistemonik enquiry starts from particulars of the outside world, to the effect indeed that the 'some kind of thing or type of event' is always an inhabitant [x] or [y] of the outside world, and definitely not some universal nature taken *in abstracto*, apart from its being instantiated in our world, that is. Putting it in Aristotle's own words, "the elements of the deduction are such-and-such *in concreto*."<sup>266</sup> As will be discussed in our section 6.5, epistemonik proof is always concerned with some actual phenomenal state of affairs, the investigation of which aims to clear up its essential structures made up of its immanent instantiations of universal natures (τὰ καθόλου).

The process of 'practical syllogism' is described at *An.* III 11, 434a16-21. First a universal assumption expressed in an account (ἡ μὲν καθόλου ὑπόληψις καὶ λόγος) is made, e.g. that a man in such-and-such a position should do such-and-such a thing (δεῖ τὸν τοιούτον τὸ τοιόνδε πράττειν); then it is stated that the act under examination is such a thing, and that I am a man in such a position. Next the relationship 'universal-particular' is established (434a19-21): "It is the latter opinion which really originates movement, not the universal assumption (ἡ καθόλου). Or rather it is both, but the latter is more stable, the former is not". While opinions may lead to a variety of actions, knowledge is not subject to these chances.<sup>267</sup>

Hence the pivot of Aristotelian epistemonik procedure is to focus on these common natures in the particulars under examination and to categorize these particulars accordingly, in order to have the appropriate 'middle' or 'medium demonstrationis'.<sup>268</sup>

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cular arguments are also argued universally, and the proof concerning the universal is inherent in that concerning the particular, since it is impossible to make a deduction at all without the universal".

<sup>266</sup> I 2, 72a25-27; see above, my section 2.1. That true knowledge is after the universal nature as it is *immanent* in particulars is basic in Aristotle's thought. See e.g. *Met.* A 9 991a12-13; B 4, 999b24-29; Δ 11, 1018b36; Z 7, 1032b1ff.; 11, 1037a29-30. This conspicuously comes to the fore at *EN* VI 3, 1139b26-35, where Aristotle claims that induction is concerned with "a starting-point, i.e. the universal point" (ἀρχῆς ἐστὶ καὶ τοῦ καθόλου), while deduction proceeds from the universal point. Now this universal point is discovered *in* the particulars. Also my sections 6.34 and 6.57.

<sup>267</sup> Ross (1961), 319, *ad loc.*

<sup>268</sup> Cf. *Sens.* 1, 436b10-12, where the qua-procedure is used to identify objects as

2. 72 *Focalization and categorization, and the acquisition of the 'middle'*

Throughout his work Aristotle's strategy of argument centres around correctly stating the appropriate property of the object under demonstration in order to found the proof on the commensurateness between the intended attribute and the substrate when brought up under the appropriate appellation. In *APr.* I 23 he explains the role correct categorization plays in the acquisition of the 'middle' or 'medium demonstrationis'; if there is no medium commonly applying to the substrate's mode of being and the attribute's, no valid deduction will come about:

*APr.* I 23, 41a2-13: In general we stated that there can never be a syllogism establishing the attribution of one thing to another unless some 'middle' is taken (ληφθέντος τινὸς μέσου) which is somehow related to each of them by the <well-known ten> ways of assignment (ταῖς κατηγορίαις). For the syllogism is altogether (ἅπλῳς) framed out of premisses, that is to say, a syllogism concerning *this* particular proceeds from premisses referring to *this*, and the one stating the relationship between *this* and *that* proceeds through premisses stating this relationship. But it is impossible to take a premiss in reference to B if we neither affirm nor deny anything of it (μήτε κατηγοροῦντας αὐτοῦ μήτ' ἀπαρνουμένους), or again to state something of A in reference to B without taking anything common to A and B but just at random affirming or denying peculiar things of them. Hence we must take something midway between the two (τι μέσον ἀμφοῖν) which connects the <respective> appellations (τὰς κατηγορίας) <of the substrate and the attribute>,<sup>269</sup> should there be a syllogism relating this to that.<sup>270</sup>

The basic elements of the epistemoniic procedure, including the special requirements for framing appropriate premisses, and the key

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'animal' or 'non-animal': "Sensation must, indeed, appertain to all animals as such: as you know (γάρ), it is by this property that we determine (διορίζομεν) the fact that there is an animal or not". The prominent role of particular being in Aristotle's theory of demonstration frequently comes to the fore, e.g. *APr.* I 29, 45b21-23; II 21, 67a23-b9; *APo.* I 1, 71a8-17; 2, 72a4-5; 18, 81b2; 31, 87b35-39 and 88a13-17; II 2, 90a28-29; 13, 97b28-29; 19, 100a6-7. It is rightly highlighted in Detel I, 263-90, esp. 303-5.

<sup>269</sup> The significance of focussing on an object's attributes as well as on discovering its essence is stressed at *An.* I 1, 402b21-403a1.

<sup>270</sup> Some further instructions are given at I 28, 44b38-45a1 and I 32, 47a38-b14. When he presented (I 4, 25b32-26a5) the basic information about the syllogism's configuration, Aristotle had already clarified the role of the 'middle'; my section 6.11. In *APr.* I 42 the differentiation into the three figures is explained along similar lines, the second figure being only meant to prove negative theses, the third only serving for particular theses, while the first figure is the most hospitable, applicable as it is to every type of premiss.



notions of 'necessary' and 'commensurate', are laid down in chs. 4-6 of *APo.* I (my sections 6.34-6.35). In a similar vein, the basic ingredients of the procedure, including in particular the appropriate definiens, are extensively discussed in *APo.* II, chs. 1-15 (my sections 6.51-6.59).

The *APr.* frequently highlights the importance of correct categorization. For instance, when it comes to proving the validity of the second and third syllogistic figures, the appropriate procedure (the proofs *κατὰ μετάληψιν* and *ἐκθέσει*, in particular) entirely depends on a correct categorization (sections 6.22-6.25). In this context Aristotle's analysis of the meaning of *κατηγορεῖν* in II 22, including the distinction between quidditative and non-quidditative ('coincidental') appellation, is of special interest. His account makes it patently clear that quidditative appellation may on occasion concern one of the object's coincidental properties, and that in such cases the appellation of the object qua self-contained substrate is the coincidental one (section 6.39).<sup>271</sup>

In *Top.* VI and VII the requirements for properly defining the 'medium demonstrationis' ('middle', *τὸ μέσον*) are dealt with (section 5.6). When he brings up the scope and proper method of metaphysics in *Met.* B, Aristotle likewise phrases the problem of how to correctly zoom in on the things' metaphysical causes and principles in terms of discovering the appropriate categorizations (sections 7.21-7.22). When he sets out to solve these problems, Aristotle meticulously scrutinises the different senses of *τὸ ὄν*. The inappropriate senses are exposed and dismissed on the basis of differentiating the ways in which 'the things there are' (*τὰ ὄντα*) are in fact brought up (sections 8.2-8.5), and investigating how 'true ousia' should be properly defined (sections 9.1-9.4; 9.6-9.7; 10.1-10.7). The semantics of naming also plays the pivotal role in assessing the most fundamental principles of Aristotelian metaphysics, act and potency (sections 11.11-11.17), as well as in Aristotle's treatment of the problems surrounding eternal substances and the ontological status of mathematical (sections 11.51-11.56).

It is along these lines that we should explain Aristotle's interest in research situations in which proper names for the intended middle are missing, and you have to invent names for genera appropriate to

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<sup>271</sup> Cf. the categorizations of substances according to their relational properties in *Cal.* 7; my section 4.61.

the demonstration, or at least to take such genera into due consideration, although they are nameless.<sup>272</sup>

### 2.73 *The qua-locution as the proper device for Aristotle's strategy of argument*

The adverbial 'qua', which is the literal Latin translation of the Greek  $\hat{\eta}$ , is used to single out a specific property or function of something, and means something like 'inasmuch as'. As we saw in the preceding sections, to Aristotle, the effectiveness of the epistemonik procedure depends on our focussing on the relevant relationships between the components of the proof. The chief condition, then, for correctly framing a premiss, the so-called  $\kappa\alpha\theta'$  ὅλου requirement,<sup>273</sup> is alternatively presented by using the qua-locution: "By 'holding of the whole ( $\kappa\alpha\theta'$  ὅλου)<sup>274</sup> <of something>' I mean what falls to it both universally ( $\kappa\alpha\tau\grave{\alpha}$  πάντος) and 'by itself' ( $\kappa\alpha\theta'$  αὐτό) and as such ( $\hat{\eta}$  αὐτό). [...]; the phrases 'by itself' and 'as such' come down to the same thing" (*APo.* I 4, 73b26-29). As a matter of fact, Aristotle's elucidations (*ibid.*, I 5) of the mistakes you may make with respect to the  $\kappa\alpha\theta'$  ὅλου requirement are discussed in terms of the very 'as such' device or, as it is later labelled, the 'qua-locution' or 'qua-functor'.<sup>275</sup> To Aristotle, the issue is so important (74a25-32) that in his view any familiarity with an isosceles's or scalene's being 2R without an awareness that this applies to them through the medium of 'being a triangle' cannot be called 'knowledge' "except in the sophistic fashion".<sup>276</sup>

In the same chapter (I 5, 74a36-b4) the qua-locution is related to the process of picking out or subtracting ( $\alpha\phi\alpha\iota\rho\epsilon\sigma\iota\varsigma$ )<sup>277</sup> the object's irrelevant modes of being. It is common knowledge that substraction is *the* pivotal device when it comes to marking off Aristotle's view of the status of mathematical from Plato's. To escape the danger of hypostatizing a particular thing's mathematical properties, Aristotle

<sup>272</sup> *HA* I 5, 490a13; 6, 490b11; IX 40, 623b5; *Meteor.* II 4, 359b30; *An.* II 7, 418a28 and 419a4; *Phys.* V 2, 226a30, 33; *EN* II 7, 1107b2; III 10, 1115b26; IV 10, 1125b17, 21; 11, 1125b26, 29; 12, 1127a12; 13, 1127a14; *EE* III 2, 1231b1; 6, 1233a39; *Pol.* III 1, 1275a3; *Rhet.* II 2, 1357b4; III 2, 1405a36. Put this alongside *APo.* I 5, 74a8ff. and II 13, 96b7ff. See also Bonitz, *Index*, 69b2-23.

<sup>273</sup> My sections 6.34-6.35; 6.71-6.73.

<sup>274</sup> Or 'as commensurately universal'.

<sup>275</sup> Wieland (1962), 197ff.; De Rijk (1995), 79-81; Cleary (1995), 312-4; Bäck (1996), 22f.

<sup>276</sup> Cf. *An.* I 1, 402b25-403a2.

<sup>277</sup> 74a39-b1; cf. 81b3. Cleary (1995), 312-18; 479-94; my section 2.62.

resorts to minutely employing designations of the object under examination which are modified ('qua-lified') by means of the qua-locution. Thus he arrives at the conclusion that, properly speaking, mathematical objects are just products of the logical process of subtraction. This procedure amounts to mentally separating mathematical properties from the sensible things they belong to, just to study them in their capacity of mathematical objects. Hence there is no question of any ontological isolation from their physical substrates (the sensible magnitudes).<sup>278</sup>

There is some confusion about the precise meaning of Aristotle's view of the status of mathematical objects. Clarity on this score is important if we are to understand the purport of the qua-locution in general. To properly understand the impact of Aristotle's use of the qua-locution on the main tenets of his philosophic thought, and his deviation from Plato in particular, it is of the utmost importance to realize what precisely, from the viewpoint of semantics, is the referent of the expression modified by the qua-locution.

Both Annas (1987, 131-47) and Mignucci (1987, 175-212) argue that Aristotle has a naive-realistic view of mathematical objects, which comes down to seeing physical things as possessing mathematical properties in the same way as they have other properties, such as being a man, or a tree, or changeable, and so on. Their position seems questionable. It is obvious enough that to Aristotle, the use of the qua-locution, which modifies our approach to things, does not *eo ipso* affect the things as they really are by themselves, in their independence from the mind, so to speak. However, the interference of the human mind, which *chooses* to focus on *this* or *that* property or aspect, while leaving out others, should not be underestimated. Putting it more precisely, to Aristotle mathematical aspects are formally quite different from physical ones, and it is precisely by the different formal considerations that the different disciplines come into existence.<sup>279</sup>

Remarkably enough, even Cleary (1995, 312-18), who fully acknowledges the decisive role of the qua-locution and the related method of subtraction for determining the status Aristotle assigns to mathematical objects, seems to lessen the opposition between Aristotle and his Master. Discussing their opposite positions, Cleary (333) rightly

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<sup>278</sup> My sections 11.52-11.53.; *Met.* M and N (with comm. by Annas (1979)), *passim*; Cleary (1995), 304f.; 489, and esp. Wieland (1962), 197ff.

<sup>279</sup> *APo.* II 18, 99a21-23. Cf. *Detel* I, 230-2.

remarks that contrary to the claims of the Platonists that arithmetic studies some pure units or numbers apart from sensible things, Aristotle argues that they are about sensibles taken under a certain qua-description which picks them out as discrete quantities, while the geometer considers the same sensibles under a different description, which, on occasion, may contradict the one applied by the arithmetician (e.g. on account of divisibility). Although this approach is consistent with Aristotle's sharp distinction between the two sciences, Cleary claims, Aristotle "appears to be flouting the principle of non-contradiction; how can it be the case, one might ask, that a man is simultaneously indivisible and infinitely divisible?" (*ibid.*). This (supposed) problem even leads Cleary to consider (333, n. 132) it "a moot question whether the qua-location refers to sensible things as ontological subjects or whether there exist some corresponding 'qua' entities which are its real referents; while the latter seems to tally with some of Aristotle's statements, it would commit him to a kind of Platonism of quasi-substantial entities that he took pains to reject".

To my mind, the issue is crystal-clear. For instance, to distinguish Socrates's immanent properties 'being wise' and 'being a man' by means of the qua-location does not entail opposing any corresponding 'qua' entities. In fact, the distinction concerns one sole entity, the wise man Socrates. Thus its only referent is Socrates, taken qua being a man at one time and qua being wise at another. Any Platonic or quasi-Platonic entity is out of the question. This does not alter the fact, of course, that to Aristotle, every discipline — and indeed every approach to physical things — takes the real world in accordance with what he considers its natural joints or articulations. Speaking with the Scholastics, such distinctions are always 'cum fundamento in re'; on behalf of Aristotle we might say that one and the same thing is 'poly-referential'. There is no reference at all to sublime Platonic entities nor to any 'diminished' entity (Medieval 'ens diminutum').<sup>280</sup>

The prominent role of the qua-location in Aristotle's strategy of argument clearly appears from Aristotle's instructions in *APr.*, where the rules for the choice of the syllogistic terms and their formations

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<sup>280</sup> F.A.J. de Haas (forthcoming a; see Cleary, 336, n. 139) has convincingly argued that the matter-like being of mathematical should be taken to refer to both their dependence on perceptible substances and to separation in thought, and that neither the text of *Met. M*, chs. 1-3, nor its background of subtraction leaves any room for the interpretation of a matter-like being of mathematical in terms of imperfection.

are presented (I, chs. 32-41).<sup>281</sup> Chapters 37-38 deserve our special attention, because this is where the qua-location is discussed within the framework of the alternative, the rival, if you like, of the syllogistic procedure.

## 2. 74 *APr. I 37-38 and the role of the qua-location*

*APr. I*, chs. 37-38, deals with the requirement of correct attribution. Supposing you wish to prove that a certain attribute C falls to substrate A by means of an intermediary property B, it is important to make an adequate analysis (ἀνάλυσις)<sup>282</sup> of the intended thesis. First it is said (37, 49a6-8) that the key expressions of syllogistics ‘that this falls to that’ (τὸ δ’ ὑπάρχειν τόδε τῷδε) and ‘that this holds true of that’ (τὸ ἀληθεύεσθαι τόδε κατὰ τοῦδε) should be taken in as many ways as there are categorial designations (κατηγορίαι). What Aristotle is doing is to explain his use of the dummy term τόδε: it should be taken as a variable for one of the ten categorial appellations. Thus it may stand for e.g. a quantitative or qualitative or relational mode of being attributed to the substrate under examination. This being stated, Aristotle admonishes us that the attribution is sometimes complicated in that the categorial modes of being must be taken either with or without qualification (ἢ πῇ ἢ ἀπλῶς), and again either as simple or compound (ἢ ἀπλᾶς ἢ συμπεπλεγμένης). The former complication is discussed in ch. 38, the latter in ch. 42.

If you are going to attribute a property to something taken in a certain respect — for instance, to obtain a commensurate attribution as required for an epistemonical proof (ἀπόδειξις) — it is pivotal to append the qua-location to the right term. Therefore Aristotle begins ch. 38 by claiming (49a11-12) that what is reduplicated (ἐπαναδιπλούμενον) in the premisses must be appended to the first extreme

<sup>281</sup> See also Detel (1993) I, 310f. A broader assessment of these chapters in the whole of *APr.* is found in Ross at 47a2-5. The qua-procedure plays also a pivotal role at *Mem.* 1, 450b18-451a2, where the problem is dealt with how one can remember what is no longer present, and the physical picture is opposed to its mental counterpart. Although their modes of being differ, it is claimed, qua being representative (as an actual apparition and a mnemonic representation, respectively) they are the same.

<sup>282</sup> The words ἀναλύειν and ἀνάλυσις are used by Aristotle to indicate the process of ‘breaking up’ a thesis into sub-theses (called προτάσεις or ‘premisses’) serving for a deductive (‘syllogistic’) proof thereof. It is this analysis that the title Τὰ ἀναλυτικά bears upon (by which Aristotle himself refers to the whole of *APr.* and *APo.*).

(τῷ πρώτῳ ἄκρῳ, i.e the major term representing the attribute), not to the middle, which *pace* Bäck (1994, 15ff.), is itself represented by the reduplication. For instance, if you want to frame a syllogism proving that there is (possible) knowledge of justice in its capacity of being good, the phrase ‘that it is good’ or ‘qua being good’ must be appended to the major term.<sup>283</sup> Thus the correct syllogism will run:

- (1) ‘What is good is known qua good  
justice<sup>284</sup> is something good  
therefore, what is just is known qua good’.

The other examples succinctly indicated (49a22-25) by Aristotle are:<sup>285</sup>

- (2) ‘What is good is known qua good  
what is healthy is something good  
therefore, what is healthy is known qua good’;  
(3) ‘What is not is known qua non-being  
the goat-stag is a non-being  
therefore, the goat-stag is known qua non-being’;  
(4) ‘What is sensible is mortal qua sensible<sup>286</sup>  
what is a man is something sensible  
therefore, what is a man is mortal qua sensible’.

In this manner the analysis is correct, including the location of the qua-location. But, Aristotle (49a19-22) remarks on account of the first example, if ‘known in its being good’ is attached to ‘being something good’, there is an incorrect analysis. He explains:

*APr.* I 38, 49a20-22: For A [= ‘known in its being good’] will be true of B [= ‘being something good’], but B will not be true of C [= ‘what is just’]. For to say ‘good qua being good’ of what is just is wrong, and indeed unintelligible.<sup>287</sup>

<sup>283</sup> For the meaning of the qua-location as paralled by the ὅτι phrase in examples of this type see my section 6.24.

<sup>284</sup> Or ‘what is just’. For this equivalence see my *Index*, s.v. ἐπιστήμη (in the sense of ‘[x]’s actually knowing’); also *APr.* I 35, 48a33 presents a nice example: ‘two right angles’ (δύο ὀρθαί) having the sense of ‘being 2R’; cf. *APo.* I 4, 73b31 and 24, 85b11.

<sup>285</sup> Ross *ad loc.*; Bäck (1996), 8f.

<sup>286</sup> ‘Sensible’ is associated with ‘perishable material constitution’; *Cael.* I 9, 278a11.

<sup>287</sup> The word ψεῦδος, I take it, is here loosely used in the sense of ‘wrong’, and bears on the inadequacy of the minor premiss, which is, on top of that, also unintelligible, because the ὅτι is used in a non-cognitive context (not meaning

The other examples, he continues (49a22-26), should be dealt with in a similar way: in every case of reduplicated categorizations (τοῖς ἐπικατηγορουμένοις) the reduplication (effected by the qua-locution) should be appended to the extreme (τῷ ἄκρῳ, i.e. the major or minor term).<sup>288</sup> In the examples (1) and (2) the supplemental designation bears on the mode of being according to which the object is known. Therefore the ὅτι phrase stands for a modification ('in its capacity of being good'), and so this ὅτι is in effect completely equivalent to the qua-locution (ᾧ). The only difference between the two is that the application range of the former device is less extensive, as it is restricted to cases in which nouns or verbs expressing a mental attitude are used. *Pace* Ross (408) and Bäck (6), there is no reason to assume that Aristotle is considering two different types of reduplicative propositions in this chapter, since the difference is merely a matter of grammar.<sup>289</sup>

What Aristotle means to explain by the 'known qua F, G etc.' examples is that the property of being known, and consequently the knowledge, is intrinsically modified by the qua-locution. Of course, the property of being good primarily belongs to the object known ('justice', 'health'), and in this capacity it is at the basis of justice (health) being known qua good. This is claimed at a17-18: "But being good is said of justice as well". This holds of any instance having 'being known' as part of the attribute term (my (1)-(3)). As a matter of fact, (4) is out of place in this respect: in 'qua being sensible' the *qua*-functor cannot be replaced with the formula, and does not intrinsically modify 'being mortal'. It rather indexes 'being a man' in its property of implying 'being sensible', which then functions as the mediator between 'man' and 'mortal'.

As to the goat-stag example (3), the phrase μὴ ὄν (49a24) does not mean 'not existent', but 'a non-being', and so bears on the fact that this term signifies something that has no real ontic value, rather than that this thing is non-existent. To Aristotle, Homer is non-existent, but not a non-being.

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'*knowing* that').

<sup>288</sup> Note that in principle, the attachment of the qua-locution to the attribute is not ruled out by Aristotle, because of the relationship of commensurateness between substrate and attribute by qua-lifying or redefining the attribute term.

<sup>289</sup> Bäck (1996, 5; 12; 25) wrongly takes 'because it is good' to be a possible rendering of ὅτι ἀγαθόν. It seems rather odd indeed to make Aristotle mean that "the non-existent is known qua [= *because it is*] non-existent", or that the good is known *because* it is good.

On occasion, the qua-locution may be appended to the minor term which expresses the attributive mode of being, in cases, that is, in which the property is 'qua-ified' to make it commensurate with the substrate. The qua-locution is not used to present the cause or explanation of what is stated, but *why* it is stated. Thus e.g. man is not mortal because he is sensible, but that he is mortal is *argued for* because he is sensible, and being sensible includes being material, and therefore being perishable.

In the second half of the chapter (49a27-b2) Aristotle goes on to discuss how to form the middle term. Two cases present themselves: (a) the attribute is un-qua-ified ("when <of a substrate> something in an unqualified manner (ἀπλῶς) is stated syllogistically"), and (b) the attribute is somehow qua-ified ("when the substrate (τόδε τι) is shown to have an attribute (read: a potential appellation) that is somehow qualified or conditioned"). For instance, (with reference to (a)) when what is good is proved to be known, and (with reference to (b)) when of what is good it is proved to be known in its being good. The two cases require two different treatments:

*Ibid.* 38, 49a30-b2: Now, if it is shown to be known without modification, you should put it [i.e. 'good'] with the mere addition of 'be-ing'; if it is shown to be known-in-its-being-good, then the addition must run 'being so-and-so'. For let 'A' be 'knowledge<sup>290</sup>-that-it-is-something', and 'B' stand for 'being so-and-so', and 'C' for 'being good'. Then it is true to say A of B; for, as was said (ἦν), there is knowledge of what is so-and-so *that* it is this so-and-so. But it is also true to say B of C; for that which C refers to *is* a so-and-so thing. Consequently A is true of C, to wit, 'there will be knowledge of what is good *that* it is good'; for by definition the term 'being' indicates a thing's proper mode of being (ἰδίου οὐσίας). But if just 'being' were taken as the middle, and 'being' without modification, instead of 'being so-and-so', were attached to the extreme, there would not be a syllogism stating of what is good that there is knowledge of its being good, but only of its being some thing. As in this case 'A' would stand for 'knowledge that it is a being', 'B' for 'being', and 'C' for 'being good'. Hence it follows that in syllogisms that are about a particular (τοῖς ἐν μέρει συλλογισμοῖς) the terms must be taken in this way.

Let us look into a few details. First and foremost we should be aware that (a) the term ὄν in τὸ ὄν and τὸ τὶ ὄν does not mean 'existent' but represents the connotative or intensional<sup>291</sup> ontic value 'be-ing' as opposed to 'non-being', and (b) the word τί in these expressions is to

<sup>290</sup> Or 'being known in its being-such-and-such'.

<sup>291</sup> For this notion see my section 1.71.



be taken as a variable for a certain determinate mode of being, and thus does not stand for the indefinite ‘something’, but some as yet unspecified determination.<sup>292</sup>

Alexander of Aphrodisias presents a succinct elucidation of the diverse ways in which the qua-locution functions where he comments on Aristotle’s (49a28) mention of “either something taken as a *this*, or in a certain respect or condition (τι τόδε<sup>293</sup> ἢ πῇ ἢ πῶς)”. He stresses (369<sup>29ff.</sup>) the different ways Aristotle has in mind in which the substrate can be brought up when syllogistic analyses are involved (ἐν ταῖς τῶν συλλογισμῶν ἀναλύσεσι). They are compared to the ways applied to conclusions couched in qua-propositions (ἐν τοῖς τὸ ἐπαναδιπλούμενον προσκατηγορούμενον ἔχουσι συμπεράσμασιν):

CAG II-1, p. 369<sup>34-3704</sup>: Some of the expressions used additionally indicate what the subject-substrate (τὸ ὑποκείμενον) is, such as in the conclusion:<sup>294</sup> that the isosceles is 2R *qua* triangle. (For what is additionally said, viz. ‘qua triangle’, indicates the quiddity of the isosceles which is the subject-substrate in the conclusion). Others indicate a respect, as in ‘what is healthy is known *qua* good’; for in some respect the healthy is known, viz. in its being something good. And when the thesis runs: ‘the goat-stag is conceivable *qua* non-being’, the condition is indicated; for it is conceivable in its condition of non-being.

## 2. 75 *The modest role of prioristic syllogistics in Aristotelian argument*

*APr.* I 38 has, I take it, a specific message: that to prove the truth of a proposition such as, say (taking Aristotle’s favourite example from *APr.* I 35, 48a33-37; cf. *APo.* I 4, 73b30-74a3), ‘that an isosceles is 2R’, you should find a mode of being mediating between ‘isosceles’ and ‘being 2R’ which represents the qualification in virtue of which the substrate can be categorized such that the property of ‘being 2R’ can be commensurately assigned to the substrate. The logical structure of this process is twofold: it is either that of a qua-proposition or a syllogistic construct.<sup>295</sup> Taking our example, it either runs: ‘the

<sup>292</sup> I am afraid Bäck has missed (1996, 14-22) most of the point of the present paragraph by rendering (5; 16-18), ungrammatically indeed, ὅν τι ‘something existent’ and τὸ ὅν ‘what is existent’.

<sup>293</sup> Reading τι τόδε with Alexander, instead of τόδε τι found in the Mss.

<sup>294</sup> The intended thesis is called in this context ‘conclusion’; cf. Verdenius (1981), 354. In the Middle Ages theses are likewise called ‘conclusiones’ (e.g. the well-known ‘Conclusiones Magistri Biligam’).

<sup>295</sup> As early as some 20 years ago Jonathan Lear (1980, 10f.) made a useful distinction between prioristic syllogistics and Aristotle’s general strategy of argument.

isosceles is, qua being a triangle, 2R' or (in the favourite mode 'Barbara' of the first figure)<sup>296</sup>:

'Every triangle is 2R  
every isosceles is a triangle  
therefore, every isosceles is 2R'.

Bäck (25) rightly observes a straightforward congruence between the syllogistic structure and that of the qua-proposition, but seems to be wrong in claiming (24;28) that the qua-proposition is in effect a condensed syllogism. I think it is precisely the other way round: the syllogism is an expanded qua-proposition.<sup>297</sup> One should not be led astray by the use of the labels 'major term' ('minor term') and 'middle term'. Although they primarily refer to the positions of syllogistic terms, they are also used by Aristotle in this context with reference to the substrate ('isosceles') and the attribute ('being 2R') terms, and the term occurring in the qua-locution ('being a triangle').

In every syllogism the function of the qua-proposition is adopted by its middle term. When Aristotle time and again underlines that the qua-locution should not be appended to the middle term, this is because the middle term is not itself indexed by the qua-locution, but rather itself indexes the major or minor term expressing the substrate or attribute, respectively.

In order to make this clear it is useful to assess the syllogistic of *APr.* in Aristotle's general strategy of argument. First and foremost there is the clear difference Aristotle makes between epistemonik proof (ἀπόδειξις) and syllogism or deduction. Bäck (1996, 28-31) has well observed that although he generally uses true premisses in his examples, Aristotle is fully aware that it is not necessary for them to be true to make the syllogism valid. The only condition for the validity of a syllogism is that the conclusion necessarily follows from the premisses.<sup>298</sup> Hence it is even possible that a valid syllogism with

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But in speaking of Aristotle's project of providing "a formal analysis of the non-formal deductions with which he was familiar" Lear seems to misconceive the formal character of the qua-procedure.

<sup>296</sup> In the present cases, I join the common habit of representing the Aristotelian syllogism as an inference scheme containing three sentences with the copula 'is', instead of using the adequate notation 'If being 2R is said of every triangle and being a triangle is said of every isosceles etc.' For this Aristotelian notation see my section 6.12.

<sup>297</sup> Remarkably enough, on one occasion (2000, 160) Bäck takes the qua-phrase as *expanded* into a demonstrative Barbara syllogism.

<sup>298</sup> See also my remarks about 'disputational necessity'; my section 6.12.

false premisses leads to a true conclusion (*APr.* II 2, 53b4ff.).<sup>299</sup> As a matter of fact, the syllogistic premisses are brought up as a conditional, and so Aristotelian syllogism is an implication, rather than an inference scheme (e.g. *Barbara*: "if the middle falls to the substrate, and the intended attribute to the middle, then ..."). The epistemonik proof has to meet stricter conditions: its 'premisses' should be (a) true, and (b) necessarily so. That is why not every syllogism is an epistemonik proof.<sup>300</sup>

The role of the 'middle' (i.e. the mode of being expressed by the middle term) can best be elucidated by taking Aristotle's favourite first figure moods, *Barbara* and *Celarent* (*APo.* I 14). After the first (i.e. perfect) figure has been defined (*APr.* I 4, 25b32-35) as the one in which the three terms are so related to one another that the ultimate term (τὸν ἔσχατον)<sup>301</sup> is <stated to be> contained in the middle term as in its whole, and the middle term is either <stated to be> contained in, or denied of the first [i.e. the attribute]<sup>302</sup> as in or of a whole,<sup>303</sup> it is described later on in terms of the role of the middle (term):

*Anal. Pr.* I 32, 47a40-b2: If then (a) the middle (τὸ μέσον) categorizes (κατηγορεῖ) <the substrate> and is itself categorized (κατηγορεῖται) <by the attribute>, or (b) if it itself categorizes (κατηγορεῖ) <the substrate> and something else is denied (ἀπαρνῆται) of it [i.e. the middle], we shall have the first figure.

Ross's comments upon this elliptical passage (400) are rather cryptic: "κατηγορεῖ in b1 (*bis*), 3 is used in the sense of 'accuses', sc. accuses a subject of possessing itself, the predicate, i.e. 'is predicated', and κατηγορεῖται in b1 (as in *APo.* 73b17) in the corresponding sense of 'is accused', sc. of possessing an attribute. In 47b4, 5 κατηγορεῖται is used in its usual sense is predicated'."

Ross's explanation is rightly criticized by Brunschwig (1981, *ad loc.*), but his own attempt to explain the peculiar use of the verb κατηγορεῖν in this context is hampered by his clinging (passim, including his discussion with the fellow-symposiasts) to the common

<sup>299</sup> In the Middle Ages there was a vivid discussion about this issue in the version 'Ex impossibili sequitur quidlibet'. See e.g. Spruyt (1993), 161-93.

<sup>300</sup> *APr.* I 4, 25b30-31; *APo.* I 2, 71b17-22; 24, 85b23-27.

<sup>301</sup> This word usually refers to the ultimate substrate or concretum; Bonitz, *Index*, p. 289b31-4; 39-55.

<sup>302</sup> Note that the intended attribute is the predicate (P) said of the subject-substrate (S) in the thesis under examination.

<sup>303</sup> In the notation (as inference schemes) usual in traditional logic, but retaining the order of the premisses as found in Aristotle: 'S-M; M-P; S-P' (the traditional *Barbara* and *Darii*), and '(S-M); N(M-P); N(S-P)' (*Celarent* and *Ferio*).

habit of taking it (syntactically) in terms of sentence predication, instead of (semantically) in terms of calling up something under a certain appellation. His proposal to ascribe κατηγορεῖσθαι an extended meaning ('being determined by') is superfluous, once we take the verb to mean 'to name', 'to categorize', 'to bring up as'.<sup>304</sup>

On my interpretation, what Aristotle tries to say in this passage (*juncto* 25b32-35) comes down to the following instruction. If you are going to syllogistically prove a thesis 'Every  $x$  is an  $F$ ', by means of the first, perfect figure, you should first bring up the substrate-subject of the thesis as satisfying the special mode of being expressed by the middle term, i.e. as an 'M-thing'; next, M-things are to be taken as satisfying the attribute expressed by the predicate (attribute) term of the thesis; hence this attribute proves to fall to the aforesaid subject-substrate.<sup>305</sup> As for partial affirmative, or (universal or partial) negative theses, the same holds, *mutatis mutandis*.

The logical structure of the proof can be couched in a twofold way. The succinct formula will be: 'The substrate [ $x$ ] *qua* an M-thing is an  $F$ '. If you want to evidence the inferential nexus, including the necessary relationships between the different modes of being involved in this proof (or their incompatibility, in the case of a negative thesis), you should analyse and expand it as follows (and this is where the syllogistic procedure comes in), taking the favourite isosceles example, and following the description found at 47a40-b2:

'If being a triangle is said of every isosceles, and being 2R is said of every triangle, then being 2R will hold of every isosceles',

or putting it in terms of Aristotle's definition of the first figure (25b32-35):

'If 'isosceles' is a subset of 'triangle', and 'triangle' is contained in '2R-thing',<sup>306</sup> there must be a perfect deduction ('syllogism') between the two extremes, 'isosceles' and '2R-thing'.

<sup>304</sup> My section 4.14.

<sup>305</sup> This is the way in which Aristotle's incidental remark at *Met.* Z 9, 1034a30-32, should be understood, to the effect that "in every deduction οὐσία is the starting-point; for it is from a quiddity (ἐκ τοῦ τί ἐστίν) that syllogisms proceed". Cf. *Met.* M 4, 1078b23-25: "It was natural that he [Socrates] should be seeking the quiddity (τὸ τί ἐστίν), for he was seeking to make deductions, and it is the quiddity which is the starting-point of deductions".

<sup>306</sup> As a matter of fact, the class of 'a closed mathematical figure formed by three straight lines' (cf. *Lin. insec.* 970a8-9) coincides with that of the 2R-things.

Therefore it seems reasonable to regard the syllogistic procedure as an expansion or unfolding of a qua-proposition, rather than to take with Bäck the latter to be a condensed syllogism.

Several other arguments can be adduced to support my view. First, there are good reasons to date the composition of *APo.* before that of the *APr.*<sup>307</sup> Second, the broad exposition of the syllogistic procedure in the latter work is most likely an elaboration of the basic first figure along formal lines. In fact, all possible ways of combining the components of the first figure are tested out by Aristotle, and by eliminating useless configurations, two more, imperfect figures are discovered, which, by the way, are of little importance for argument. Third, Patzig (1979, 36-9) rightly criticizes the opinion that it would be quite natural to find in Aristotle's other works syllogistic forms of argument because he is the one who discovered them. To my mind, the syllogistics as expounded in *APr.* are best regarded as a development of the formal structure of the deductive argument couched in the main modes of the first figure, and thus they are products of a logical 'game', rather than intended to develop the arsenal of Aristotle's strategy of argument. In this line of thought later developments, such as Galenus' discovery of a fourth figure, are quite comprehensible.<sup>308</sup>

Finally, and most importantly, the prominence of particular being in Aristotle's philosophy needs to be reckoned with, which is bound

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<sup>307</sup> I agree with Barnes (1981) when he distinguishes between 'proof' (ἀπόδειξις) and 'syllogism', but I reject the suggestion lurking in his verdict about their relationship (52: "The Apodeictic Theory which the *Posterior Analytics* presents is married to Syllogistic; but there is reason to believe that, before the wedding, Apodeictic lived a virginal life untouched by the Syllogism"), that apodeictic was formally imperfect as long as it lacked the impregnation by syllogistics. As we will see shortly, (1) Apodeictic has its own logical structure, namely, the qua-procedure, and (2) the range of activity of syllogistic is far more restricted than the domain of the qua-procedure. Aristotle insists himself (*APo.* I 14) that after all it is only the first figure in which scientific proofs can be couched in a proper fashion. Smith (1982a) convincingly argues that in *APr.* Aristotle is deliberately restricting his attention to a limited class of statements, viz. those allowable in epistemonical argument, and that the doctrines of *APo.* were almost all developed before the prioristic syllogistics had been produced (cf. *ibid.*, 114). I think his question (135), What can be determined about the origins of the earlier theory underlying *APo.* and its course of development into the finished product seen in *APr.*? can now be simply answered: it is the qua-procedure of reasoning which was the 'earlier theory', and remained the basic one.

<sup>308</sup> Likewise, Gerald Odonis (Guiral Ott, 14th. cent.) developed Aristotelian syllogistics by establishing in each of the three figures 'coniugationes inutiles utilitari possibiles', configurations, that is, operating with e.g. special conversions. See his *Logica: I De syllogismis*, 154f.; 167f.; 172f.; 176f.; 179f.; 184f., ed. De Rijk, Leiden 1997.

to undermine the supposedly central position of syllogistics in Aristotle's general strategy of argument. From the viewpoint of his recognizing only particular, concrete, enmattered being, even the protagonist modes *Barbara* and *Celarent* cannot have direct bearing on the things-there-are ( $\tau\acute{\alpha} \delta\upsilon\tau\alpha$ ). The only way to accord them such bearing is to apply the universal thesis to particulars qua enmattering this or that 'universal' (i.e. universally applicable) mode of being. Now this is precisely what the qua-procedure accomplishes, e.g. in 'this tympanon shaped as an isosceles is qua triangle 2R'. In the same line of thought it is quite comprehensible that, unlike the qua-procedure, in the syllogistics of *APr.* there is no room for particulars, in spite of (*nota bene*) their privileged position in Aristotelian thought. All these features must lead to one conclusion: prioristic syllogistics is merely an elaboration of the two basic modes of the first syllogistic figure, while, more significantly still, these two modes are themselves mere formalizations of the corresponding qua-procedures.

The previous observations may also suggest an answer to what Barnes has called "a classical problem in Aristotelian exegesis", namely how to account for the (putative) fact that in his own philosophical and scientific work Aristotle does not put his 'scientific' method into practice.<sup>309</sup> Barnes has argued for the thesis that *APo.* I does not present a methodology of research, but is concerned with the organization and presentation of the results of research; its intention is pedagogic-didactic.<sup>310</sup> In line with what we have just stated, the aforesaid problem is a pseudo-problem, based as it is on a non-fact; actually, Aristotle does apply the 'scientific' method devised in *APo.* in his other works. This becomes clear enough, once the optical error which caused people to establish the aforesaid 'fact', has been cast aside. This requires a statement of fact in three steps: (a) the posterioristic procedure has *as such* nothing to do with prioristic syllogistics, but with adjusting the categorization of the chief components of the thesis under demonstration by bringing up them as satisfying the mode of being mediating between them; (b) the resulting argumentative procedure is most adequately formalized by framing a qua-

<sup>309</sup> Düring (1966), 22.

<sup>310</sup> Barnes (1975), *Introd.*, Xf.; cf. his (1981). For other literature on the issue (Grote, von Fritz, Grene, Mittelstrass, Lesher, and particularly Mignucci, 1975) see Guthrie VI, 170, nn. 1 and 2. The general issue is broadly discussed in Smith (1993), who argues for there being in Aristotle a "foundational project" (285) comprising epistemonical and dialectical argument as well; cf. his (1994).

proposition, in which these components are indexed qua satisfying the mediating mode of being (e.g. 'isosceles *qua* triangle'); and (c) in its capacity of expanding a qua-proposition, prioristic syllogistics enables us to make the adapted categorizations explicit by resolving (Aristotle's ἀνάλυσις) the qua-indexing procedure into explicit attributions, e.g. 'isosceles qua triangle' becomes 'being a triangle is said of [or falls to] being an isosceles'.<sup>311</sup>

Viewed in this perspective, Aristotle's overwhelming use of the qua-locution throughout his works<sup>312</sup> unmistakably shows the pertinence of this (model) posterioristic procedure when it comes to an assessment of Aristotle's general strategy of argument. Prioristic syllogistics is merely a by-product of Aristotle's treatment of deductive argument.

## 2. 76 *Indexing by qua-locution as the device for categorizing commensurately*

As will be clear from my discussions above, the appropriate device for bringing up the 'middle' or 'medium demonstrationis' is the *qua*-locution, which singles out precisely that mode of being of a substrate which makes it commensurately match the attribute under demonstration. From this angle it is appealing to investigate how such a singling out can be accounted for.

In *APo.* I 4, 73b26-27, Aristotle clearly associates the locutions καθ' αὐτό and ᾧ ('qua'). The distributive connective κατά is discussed in the *Lexicon*, *Met* Δ 18. In the formation καθ' ὃ ('in virtue of which') it can single out (1) an object's<sup>313</sup> quiddity and subsistence or substance (τὸ εἶδος καὶ ἡ οὐσία), or (2) that in which it naturally comes to the fore as its primary substrate (ἐν ᾧ πρῶτον πέφυκε γίνεσθαι)<sup>314</sup>. The first sense is instanced by the Platonic Form Good itself,<sup>315</sup> "in virtue of which a good man is good"; as an example of the second we find a

<sup>311</sup> To represent these assignments in the notation of traditional logic using 'S *copula* P' statements is yet another move away from Aristotle's intentions.

<sup>312</sup> This is commonly recognized. Bäck (1996), 31-84, presents an extensive discussion of Aristotle using it in different areas, including paralogisms. I am afraid the prominent role of the qua-procedure is insufficiently recognized by Detel (I 310; 315; 320).

<sup>313</sup> Lit. 'of each thing'. The Greek idiom likes to use the pronoun ἕκαστος, to indicate that what is said holds of every individual whatsoever.

<sup>314</sup> I take the verb γίνεσθαι in its cognitional sense: 'to appear', 'to be perceived'.

<sup>315</sup> Out of a Platonic context: 'the good, precisely'. Ross (*ad loc.*) may well be right in regarding the statement "curiously Platonic".

thing's surface ('being surfaced') as that in virtue of which it is 'being coloured'.<sup>316</sup> Aristotle summarizes:

*Met.* Δ 18, 1022a17-24: Thus, what is said to be 'that in virtue of which' is primarily a thing's form, and secondarily that which is, so to speak (ὥς), its matter, i.e. its primary substrate (ὑποκείμενον πρῶτον). Now, generally speaking, 'that in virtue of which' occurs in the same number of ways as 'cause'. [...]. Further, 'that in virtue of which' is said according to <somebody's> bodily position (κατὰ θέσιν),<sup>317</sup> as in 'in so far as he is standing' or 'in so far as he is walking'; for all these phrases indicate <a thing's> place and position.

Next the phrase καθ' αὐτό, the twin of the *qua*-locution (ἥ), is discussed:

*Ibid.*, 1022a24-36: Hence 'in virtue of itself' [or 'as such'] must also be used in several ways. For in one sense 'as such' bears on a thing's quiddity, as in 'Callias as such is Callias', i.e. what it is to be Callias (τὸ τί ἦν εἶναι Καλλία). In another sense it bears on what belongs to its definiens, as in 'Callias as such is an animal'; for 'animal' is found in his definiens, because Callias is a particular animal. Further, <it bears on> whatever is something's — or its part's — primary recipient, as in 'a surface as such is white', and 'a man as such is alive'; for the soul, the primary recipient of life, is a part of a man. Further, that which as such is the ultimate ontic principle (ἀΐτιον); for there are several ontic principles of a man, viz. 'being an animal', 'being a biped', but all the same a man as such is a man. Further, whatever falls to something alone, and in so far as it falls to it alone, just by itself and in isolation, *that* <falls to it> in virtue of itself.<sup>318</sup>

From this exposition it is clear that Aristotle distinguishes two main types of the use of the restrictive connective: one accomplished by the phrase καθ' ὃ, which singles out an essential or coincidental aspect of an object; the other carried out by the phrase καθ' αὐτό, which brings up the entire object, but precisely taken 'in virtue of itself'. It is the object's various ontic components that enable us to

<sup>316</sup> I take the substantive nouns to indicate things as possessing the properties signified by them.

<sup>317</sup> *Cat.* 7, 6b11-12. Bäck's (1996, 39) rendering "in what part [of the city] is it situated?" completely misses the point.

<sup>318</sup> The final sentence (whose reading is quite uncertain; see the critical apparatus in Ross) is rather cryptic and not clarified by an example. My guess is that Aristotle has the so-called 'proprie propria' in mind, as in 'Man is as such capable of laughing'. Cf. *PA* III 10, 673a8 ("... because man is the only animal that laughs"). 'Proprie propria', such as Man's 'risibilitas', are later taken not to be parts, but necessary sequels of the definiens. Incidentally, the property of 'being 2R' likewise does not belong to the triangle's definiens ('mathematical figure formed by three given straight lines'; *Lin. insec.* 970a9), but seems a 'proprie proprium'.



pick out precisely that property which is commensurate to the attribute we intend to prove of it.<sup>319</sup>

The semantic procedure is extensively described by Aristotle in *APo.* I 5 when, after his exposition (in I 4, 73b26-74a3) of the καθ' ὅλου requirement,<sup>320</sup> he goes on to warn us to avoid mistakes, by calling up the subject of the thesis in question under an inappropriate categorization:<sup>321</sup>

*APo.* I 5, 74a5-13: It must not escape our notice that it often happens that we make mistakes and that what we try to prove<sup>322</sup> does not fall <to the subject> primitively and commensurately in the sense it seems to be being proved commensurately and primitively.<sup>323</sup> We make this error when either we cannot grasp anything generic to the particular, or we can, but cannot impose a common name upon specifically different things, or that which the proof bears on happens to be a partial whole;<sup>324</sup> for then the proof will bear on the particulars in question, and surely hold of every instance, but nevertheless the proof will not hold of the primary substrate and commensurately [καθ' ὅλου; lit. 'bearing on the entire essence']. I say that a proof holds of the primitive substrate and as such, when it bears on it primitively and commensurately.

In a similar vein instructions are given in *APr.* I 27. This chapter extensively discusses the preliminary question how we can have a supply of syllogisms to address all kinds of problems. The discussion opens with a survey of the different ontic components of things we may come across in our world.<sup>325</sup> Next, the selection of premisses suitable to each problem is considered. You should first determine the object by itself, *plus* its definientia and whatever peculiar further falls to it (ὅσα ἴδια τοῦ πράγματος); subsequently you should lay down

<sup>319</sup> Likewise at *EE* III 1, 1228a30ff., there is mention of modes of being singled out after (κατά) which someone is named a coward or a confident man. At *Met.* B 2, 996b1ff., where the plurality of causes and disciplines is discussed, Aristotle observes (996b14-18) that we may know the same thing in many ways.

<sup>320</sup> My section 6.34.

<sup>321</sup> Surprisingly, Bäck takes (1996, 30) Aristotle (in *APo.* I 4, 74a4-13 and *APr.* I 27, 43b22-29) to require that "*attributes* (italics mine) should be peculiar to the subject of the conclusion" — in other words, should be adapted, as though Aristotle insists on adapting our very thesis. Rather it is the *categorization* of the subject (or attribute) that must be adapted, not the subject or attribute themselves, let alone the intended thesis.

<sup>322</sup> Taking the present participle δεικνύμενον *de conatu*.

<sup>323</sup> 'Primitively', i.e. 'falling to the subject as to this attribute's primary substrate'; our section 6.34. It is particularly the primitivity requirement which is at stake in what follows.

<sup>324</sup> Hence the καθ' ὅλου requirement is frustrated.

<sup>325</sup> *APr.* I 27, 43a25-43; my section 6.11.

what logically follows the object (ὅσα ἔπεται τῷ πράγματι), and again what the object follows (οἷς τὸ πᾶν ἀκολουθεῖ), and what cannot fall to it (ὅσα μὴ ἐνδέχεται αὐτῷ ὑπάρχειν). These must all be listed in accordance with their different relationships to the object under examination (43b1-11).

What these instructions come down to is to determine the intended object as it happens to appear by itself, and then establish the whole network of its essential and other properties so as to have a gamut of possible categorizations at your disposal, from which to select the appropriate terms for your argument.

In the subsequent passage (43b11-22) we are taught (with an eye for correcting the categorization of the substrate or the intended attribute) to select not properties that follow only<sup>326</sup> some of them, but those that follow the thing in its entire extension, because one needs universal premisses for framing syllogisms (43b11-14). Likewise one must select those designations of the attribute that fit the subject taken in its whole quiddity (ὅλοις),<sup>327</sup> for the same reason. But the attribute which follows the object must not be supposed to follow the object as a whole: I mean, not every instance of 'being an animal' follows 'being a man', but the only requirement is that what follows follows in an unqualified sense; the mark 'every' must bear on the subject (43b16-22).

Next the above instructions for finding the adequate terms as found in *APo.* I 5 are brought to our attention; this time, however, these concern expanded logical constructs ('syllogisms'), so that there is talk of 'attributes' assignable to the substrates rather than their alternative designations indexing them by means of the qua-locution:

*APr.* I 27, 43b22-38: Whenever the substrate whose fitting attributes we must obtain is contained by something else, we must not select among them what follows (or does not follow) universally [i.e. generically]; for they are taken up in them,<sup>328</sup> because what follows 'animal', also follows 'man', and what does not fall to 'animal' does not fall to 'man' either. Rather, we must in each case take what is peculiar to the thing in question. For there are things peculiar to the species beyond the scope of the genus; for peculiar things must fall to the species as being distinct. Nor, of course, must we take those things which the inferior term follows owing to the fact that it follows the superior term (τῷ καθόλου), e.g. take as what follows 'animal' what in

<sup>326</sup> For the frequent omission of μόνον see Verdenius (1981), 348; 351.

<sup>327</sup> This concerns the requirement of *APo.* I 4-5; our section 6.34.

<sup>328</sup> Ross (*ad loc.*) aptly paraphrases: 'for in assigning to things their genera, we have assigned to them the attributes of the genera'.

fact follows from 'man'; for it is necessary that, given that 'being an animal' follows 'being a man' that it should follow all of them, too. However, these are the things that follow more properly to the selection 'man'. Moreover, one must take things that in the majority of cases are antecedents or consequents of the selected term; for as to problems concerning the majority of cases, the syllogism too proceeds from premisses of this kind, either all of them or at least some of them, for the conclusion of each syllogism resembles its starting-points. Again, we must not choose attributes that follow all terms; for no syllogism will proceed from such premisses. The reason why this is so will be clear in what follows (28, 44b20-24).<sup>329</sup>

Evidently, in the passage just quoted the choice of the most appropriate middle (which in the *qua*-procedure will serve as that by which the substrate is indexed) is elucidated in terms of syllogistics.<sup>330</sup> Generally speaking, since the middle represents the quiddity of the attribute that should be assigned to the substrate, what the demonstrator has to do is to index the substrate with this intermediate mode of being to obtain a designation of the substrate that is commensurate to the attribute.<sup>331</sup> A passage of the *APo.* (II 18, 99a21-23) is most explicit on this score: "The middle [*τὸ μέσον*, i.e. the mode of being mediating between the substrate and the attribute] is the definiens (*λόγος*) of the first extreme [i.e. the one expressing the attribute]; that is why all the disciplines are built up starting from defining (*δι' ὀρισμοῦ*) <the specific attribute that establishes their formal object>". For instance, in physical matters one may be interested in an object's, say, corruptibility; the most appropriate middle, then, is the thing's being an 'ens mobile'; now, it is precisely the attributes and principles of the things-that-are in so far as ('qua') they are subject to motion and change which are the formal object of the *Physics*.<sup>332</sup>

<sup>329</sup> Cf. *APo.* II, 15-18.

<sup>330</sup> In *APr.* II 27, 70b1-6, the genuine middle (*τοιοῦτο δὲ μάλιστα τὸ μέσον*) is called an 'indication' (*τεκμήριον*), which is itself defined as 'that which procures knowledge' (*τὸ εἰδέναι ποιοῦν*).

<sup>331</sup> The intended quidditative mode of being not only concerns the thing's formal ontic cause; in *APo.* II 11, Aristotle points out that each of the four types of cause can provide us with an appropriate middle to secure a genuine proof.

<sup>332</sup> *Phys.* II 7, 198a22-29; *Met.* E 1, 1026a13-14; K 3, 1061b6-7; 4, 1061b28-30; 7, 1064a30-32; A 1, 1069a36-b1; *Carl.* III 7, 306a16-17; IV 1, 308a1-2. The significant use of correct categorization and the *qua*-procedure in Aristotle's discussion of the problems surrounding Becoming in *Phys.* I are well known. See e.g. Lewis (1991), 193-210; 223-43. Generally speaking, it is of particular interest when in *Phys.* and *Met.*, Aristotle is distinguishing 'subsistent thing' and its matter. Sellars rightly argues (1967, 118) for the identity of individual form and thing in Aristotle in the context of the *qua*-procedure. For the *qua*-procedure as used by Aristotle for establishing the proper status of mathematics see also my section 11.53 in Vol. II.

## CHAPTER THREE

### APOPHANTICS. THE SEMANTICS OF STATEMENT-MAKING

#### 3. 1 *Introduction*

By and large, in *De interpretatione* (henceforth *Int.*) Aristotle is concerned with our ability to speak about all that presents itself to our mind. From chapter 4 onwards, the author deals with statement-making expressions (affirmation and negation), which are the main tools for conveying our thoughts about things. This discussion is prepared (chs. 1-3) by some important observations concerning the basic constitutive elements of such expressions, viz. ὄνομα and ῥῆμα. Although they do not form an autonomous body of linguistic theory with no relevance to the rest of the treatise and the *Organon* in general,<sup>1</sup> they should surely be seen as in fact containing Aristotle's general semantic views.<sup>2</sup> The remainder of the treatise deals extensively with special kinds of statement-making utterances, including a discussion of their various types, also taking into account the diverse modalities involved, their interrelations, with a great deal of attention to matters of contradiction and contrariety, and the problems and puzzles concerning their objective content, in particular those bearing on truth and belief.

Whitaker thinks (1996, 2) that *Int.* should be read closely with the *Topics* and the *Sophistic Refutations*, rather than with the *Categories* and the *Prior Analytics*. Therefore he believes that the author only meant to provide a theoretical underpinning for dialectic, and thus reduces (2-4) the treatise to just a treatment of contradictory pairs of assertions, which admittedly are central to the working of dialectic.

On Whitaker's interpretation, the treatise's scope seems to be unduly narrowed to dialectical training as mainly practised in *Top.* and *SE*. The work more generally bears on 'enunciations' expressing what in the opening chapter of the treatise is called 'combined

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<sup>1</sup> Montanari I, 12f.

<sup>2</sup> Ackrill (1981), 79; Arens (1984), 1f.; Rehn (2000), 108-26; 142-57, *pace* Irwin (1982), 265 and Whitaker (1996), 1. Arens wrongly regards (1) *Int.*, chs. 1-3 as merely preparatory to syllogistic.

thoughts', including those concerning the great philosophic issues, so that the title *Περὶ ἑρμηνείας* suits its content rather well.<sup>3</sup> One should realize that the laws of non-contradiction (LNC) and of excluded middle (LEM), whose position is so highlighted by Whitaker, have their *locus naturalis* not so much in the semantic analyses prompted by Aristotle in *Int.* as in *Met.* (Γ3-7), where they serve to knock the bottom out of "onesided and sweeping statements" about truth and reality (Γ 8). Hence it seems more appropriate to take the treatise as dealing with affirmation and negation in general (taken as the two basic tools for expressing thoughts by framing statement-making utterances, irrespective of the philosophic or purely dialectical context), as is also suggested by the title of the parallel work by Theophrastus (*Περὶ καταφάσεως καὶ ἀποφάσεως*).<sup>4</sup> Following a suggestion made by my late Leiden colleague, Gabriel Nuchelmans, I propose to speak of Aristotle's treatise on 'apophantics'.

*Int.* has always been regarded as one of Aristotle's most difficult works, in particular because of its complexity and the author's almost unparalleled elliptical manner of expression.<sup>5</sup> Boethius had to confess that, owing to the combination of doctrinal acumen and the elliptical manner of expression of this treatise, the interpreter is bound to sweat over it, more indeed than over *Cat.*<sup>6</sup> Even Porphyry considered it useful to refer to contemporaneous scholars who were convinced that it was impossible to provide a satisfactory interpretation of *Int.*, considering the numerous contradictions and other

<sup>3</sup> At *Rhet. AL* 29, 1436a22 the word ἑρμηνεία is used in its general sense of 'expression of a thought'. The word can also stand for the communication between birds (*PA* II 17, 660a35). Bonitz, *Index*, 287a57-b9.

<sup>4</sup> Weidemann (1994), 43f. Whitaker — who has made no use of Weidemann's magistral commentary on *Int.* (which he did adopt in his *Bibliography*, p. 221) — has not made a strong case for rejecting the (spurious) title *Περὶ ἑρμηνείας* as inappropriate, let alone for supporting his own suggestion "On the Contradictory Pair" (*Περὶ ἀντιφάσεως*). For the authenticity of the treatise see Weidemann, 45ff.; for its early date, *ibid.*, 27ff. Like some others before him, e.g. Ernst Kapp (1942, 6f.; 22), Whitaker rightly argues (1f.) for the close relationship between our treatise and *Top.* and *SE*, rather than linking it up, as is commonly done, with the *Analytics*. However, his doctrinally marking off (*ibid.*) *Int.* from *Cat.* is not underpinned, and highly disputable; also my section 3.9.

<sup>5</sup> Ackrill has good reason to speak (1963, 149) of Aristotle's "dangerously elliptical forms of expression". Cf. Barnes (1971), *Introd.*, XII; Verdenius (1981), 347; Weidemann, 415; Bostock (1994), *Introd.*, XI.

<sup>6</sup> In *Periherm.* ed. IIa, 4<sup>9-14</sup>: "Sed quamquam multa sint Aristotelis quae subtilissima philosophiae arte celata sunt [*sint*, Meiser], hic tamen ante omnia liber nimis et acumine sententiarum et verborum brevitate constrictus est. Quocirca plus hic quam in <De> *decem praedicamentis* expositione sudabitur".

shortcomings in the diverse expositions undertaken by commentators like Aspasius, Herminius and Alexander.<sup>7</sup>

Modern scholarship still views the interpretive task as a highly intricate endeavour, though feasible all the same. As it stands, the treatise can be taken as Aristotle's attempt to deal with *the* basic tool for understanding people and making oneself clear, viz. the statement-making utterance. This tool indeed forms the very basis of any discussion of what is, varying from serious metaphysical observations to frivolous sophisticated debates.

### 3. 2 *Some basic devices for statement-making*

Statement-making<sup>8</sup> is only meaningful and appropriate if the statement, including its components, can be shown to be more than just a series of empty noises. This is where the problem of the representative nature of language comes in. Right at the beginning of our treatise, Aristotle addresses this problem by directing his readers' attention to the phenomenon of what he calls *ὁμοίωμα*. This issue deserves special attention.

#### 3. 21 *Words as representing thoughts*

In the opening chapter, Aristotle's attention is focussed on the representative character of expressions and thoughts, respectively:

*Int.* 1, 16a3-8: Spoken utterances are tokens (σύμβολα)<sup>9</sup> of 'affections in the soul' [i.e. thoughts], and written marks tokens of spoken utterances. And just as written marks are not the same for all men, neither are spoken utterances. But what these [viz. utterances] are in

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<sup>7</sup> Boethius, *ibid.*, 293<sup>27</sup>-294<sup>4</sup> (on account of *Int.*, ch. 10, whose semantics really is most obscure, if it is not interpreted in light of Aristotle's peculiar view of the anatomy of the statement-making utterance): "Dicit autem Porphyrius fuisse quosdam sui temporis qui hunc exponerent librum et quoniam ab Hermينو vel Aspasio vel Alexandro expositiones singulas proferentes multa contraria et expositionibus male ab illis editis dissidentia reperirent, arbitratos fuisse librum hunc Aristotelis ut dignum esset exponi, non posse multosque illius temporis viros totam huius libri praeferisse doctrinam, quod inexplicabilem putarent esse caliginem". Cf. Ammonius CAG IV-5, p. 1<sup>3-5</sup>.

<sup>8</sup> My over-all indebtedness to the still invaluable pioneering work by Ackrill (1963) as well as to Weidemann's (1994) extensive commentary on *Perihermeneias* is much greater than it may appear from the references. Both works are henceforth referred to in this chapter without the years of publication.

<sup>9</sup> Cf. *Sens.* 1, 437a14-15; my section 8.31 in Vol. II.

the first place (πρώτων) significative of — affections in the soul — are the same for all people; and what these affections are ‘likenesses’ (ὁμοιώματα) of — things (πράγματα) — are surely (ἤδη) the same.<sup>10</sup>

It is pivotal for grasping the meaning of the word ὁμοίωμα in Greek authors, Plato and Aristotle in particular, to realize that in addition to the basic sense of ‘likeness, image’, ‘replica’, it connotes the idea of ‘being substitutable for’ or ‘representative of’ the object the thing called ὁμοίωμα is said to be the likeness of, to the effect that an object’s nature may be designated and clarified by its ὁμοίωμα.<sup>11</sup> To my mind, it is this pregnant connotation of representativity conveyed by the word ὁμοίωμα that is predominantly present in the opening lines of our treatise, in which expressions are said to refer primarily to thoughts (affections of the soul), which, in their turn, refer to πράγματα (= things-being-so-and-so).<sup>12</sup>

### 3. 22 *Combined and uncombined thoughts and utterances*

The remaining part of the opening chapter goes on to contrast combined thoughts and utterances with uncombined ones and, by the same token, the notion of truth-value comes up for consideration. The author explains that to be thoughts and utterances having combination (or separation), they need the addition of ‘be’, which makes them susceptible of being true or false:

*Ibid.* 1, 16a9-16: Just as in the soul there sometimes is a thought (νόημα) without being right or being mistaken, while at other times there is one to which it necessarily falls that one or the other is the case, so also with spoken utterances; for falsehood and truth are to do with combination and separation. Thus names, and attributes<sup>13</sup> as well, when taken by themselves, represent<sup>14</sup> a thought lacking

<sup>10</sup> This passage, including its different interpretations is thoroughly discussed in Weidemann, 134-51, who for the predicative use of the adjective πρώτων refers to Kühner-Gerth II, 273. Rehn rightly compares (2000, 139) our passage to Plato, *Rep.* II 382B9-C1: “For the falsehood expressed in statements is a representation of an affection of the soul” (ἐπεὶ τό γε ἐν τοῖς λόγοις [sc. ψεύδους] μίμημά τι τοῦ ἐν τῇ ψυχῇ ἐστὶν παθήματος).

<sup>11</sup> In my section 1.3, I have discussed some significant passages from Aristotle to illustrate this wider meaning.

<sup>12</sup> *Int.* 14, 23a32-35 and 24b1-2 are also reminiscent of chapter 1. In the opening lines of *SE* (165a6-17) the same idea of words as tokens for things is cleared up by a comparison with our use of pebbles in calculation, but no reference is made to the thoughts as likenesses intermediary between words and things. See my section 5.81. — For the proper meaning of πράγμα see my sections 2.22-2.24, and 8.43 in Vol. II.

<sup>13</sup> For this rendering of ῥῆμα see my section 3.28.

<sup>14</sup> ὅμοιος τῷ νοήματι, litt. ‘are the likes of’, which should be understood, I take it, in terms of the preceding idea of ‘representativeness’ (ὁμοίωμα).

combination or<sup>15</sup> separation, for instance, ‘man’ or ‘pale’ when nothing further has been added. For so far, such a thought is not yet false or true, although it is significative of something definite (σημείον τοῦδε)<sup>16</sup> — even the notion<sup>17</sup> ‘goat-stag’ signifies something, albeit not, as yet, anything true or false —<sup>18</sup> unless ‘be’ (εἶναι) or ‘not-be’ (μὴ εἶναι) is added, either simply or with reference to time.

As to the use of the verbs ἀληθεύειν and ψεύδεσθαι, in common Greek these verbs are said of persons who are in truth or in error.<sup>19</sup> Sometimes, as in the present treatise, their proper subject is someone’s soul or mind (νοῦς), or knowledge (‘state of knowing something’), or they are said of the linguistic expression itself.<sup>20</sup> Thus by the first sentence Aristotle means to say that sometimes the possessor of a thought is in truth or in error, and sometimes he is not.

Before going on to examine what Aristotle had in mind when he wrote this basic passage, it should be noticed in passing that ῥῆμα is here instanced (16a15) by the adjective λευκόν,<sup>21</sup> not some verb, which commonly is, but should not be obscured by rendering it ‘verb’, instead of ‘attribute’ (either verbal or nominal) or ‘attributive (‘appositive’) determination’ (our sections 3.26-3.28).

The clear message of the above text is threefold: (1) for both thoughts and their utterances it holds good that some of them have no truth-value, while some others necessarily entail their possessors’ being in truth or in error; (2) in order to belong to the second class, i.e. to have a truth-value, a thought, and its linguistic expression, must be involved in (περί) a combination or a separation, and (3) this being involved in a combination or separation linguistically comes to the fore by the addition of εἶναι or μὴ εἶναι to the onoma or rhema (or a composition thereof) by which the thought is signified.

<sup>15</sup> Reading ἢ — with our oldest manuscript, Ambrosianus L 93 (saec. IX), the MS containing the Ammonii recensio (saec. V), and a Syrian translatio antiqua (saec. VIII *init.*) — instead of καί; see edition Minio-Paluello.

<sup>16</sup> I follow the interpretation which is already found in an old Arab translation, and is argued for by Weidemann (*ad loc.*) among others. The word σημείον has the same sense (‘significative of’) some lines further, in the definition of ῥῆμα (16b7).

<sup>17</sup> For the masculine article ὁ being used (instead of the neuter τό) to indicate the autonomous use of the following substantive noun, see Kühner-Gerth I 31, *Anm.* 1.

<sup>18</sup> I take the remark about the goat-stag as parenthetical, and that the next sentence continues Aristotle’s account of the general issue of combination and separation.

<sup>19</sup> E.g. 9, 18a37; 18b7; 10, 20a34-36; 14, 24b8; *Met.* Γ 4, 100b8b3; 5, 1009a14; 1010a9; 1010b25; Θ 10, 1051b3; K 5, 1062a25; *An.* III 3, 428a4; *EN*.IV 13, 1127a19.

<sup>20</sup> *ENV*I 3, 1139b15; *An.* III 3, 428a17; *Int.* 2, 16b3-5; 4, 17a2; our rule RIR (1.71).

<sup>21</sup> Also at *Int.* 10, 20b2, *Top.* VI, 11, 148b36, and *Met.* Z 16, 1040b34.



However, our text also contains some less unequivocal clues. A first is the author's use at 16a 17-18 of two infinitives in the phrase τὸ εἶναι ἢ μὴ εἶναι, which are often rendered by the finite forms 'is' and 'is not'. Secondly, at 16a12 falsehood and truth (in this order) are said to be linked with combination and separation; in this order indeed, probably to prevent the suggestion that truth has to do with combination, while falsehood with separation; notice in addition that at 16a12 the use of the strong conjunction τε καί emphasizes Aristotle's taking the truth-and-falsehood issue as what we call 'truth-value'. Again, there is Aristotle's somewhat unclear remark in the concluding sentence about how the 'be' and 'not-be' formulas are qualified in that they are used "either simply or with reference to time". But above all, there is the poignant question what precisely Aristotle has in mind when he talks about the function of combination and separation. In my view, these questions are closely related. Let us address this cluster of problems by first examining the combination/separation issue.

### 3. 23 *The impact of combination on statemental truth and falsehood*

While the issue of combination and separation<sup>22</sup> clearly appears somehow to be connected with the thoughts' and utterances' susceptibility of a truth-value, our text is not as explicit as might be desired about the notions of combination and separation themselves. Ackrill rightly remarks (114) that of course, not every kind of combination in an expression ensures it a truth-value: prayers are not true or false (17a3) nor is a definiens, such as that of 'man', 'rational animal' (17a11). On the other hand, our text explicitly implies that even a simple (or 'incomposite') thought (νόημα) can obtain a truth-value, provided there is 'something added'. This is clear not only from the opening sentence but also from the goat-stag example (at 16a16-17). Hence combination does not as such bear on framing composite thoughts.

What, then, is the nature of the combination (and separation) meant here? Should we identify combination with the addition of the assertoric operator ἔστι, and does separation bear on the use of the negative operator (οὐκ ἔστι)? While an answer in the affirmative is suggested by 16a17-18: "unless 'be' or 'not-be' is added", this will turn out to be somewhat premature. Firstly, it must strike the reader that

<sup>22</sup> Also my section 2.3.

when he frames the general rule for the first time at 16a13-15, Aristotle does not speak of adding 'be' or 'not-be', but just 'something' (προσθεῖν τι); the same wording is found at 4, 16b30, where the cognate rule concerning affirmation and negation is framed. What is more, at 10, 19b37-38, the 'something' turns out to be some determination to be added to the infinite name οὐκ ἄνθρωπος, for which, subsequently, the attribute δίκαιος is instanced. Likewise some lines further on (at 20a14-15), rhemata like ὑγιαίνει are meant to be added (which (granted) can be analysed into their participle and ἔστι). On the other hand, when it comes to the specific requirement of adding 'be' to acquire the combination we need, Aristotle as much as four times uses the formula with the infinitive εἶναι, viz. besides 16a17-18, also at 3, 16b22, 12, 21b6 and 21, while the addition of the finite verb and its inflexions is only spoken of twice, viz. at 2, 16b2-3 and 5, 17a11-12 ("unless 'is' or 'will be' or 'was' or something of this sort is added").<sup>23</sup>

Let us have a more detailed look at all the above passages. As for the case of those speaking only of 'something to be added', evidently by this 'something' either the finite verb ἔστί (or its past or future tense) is meant, or an attributive determination, such as 'being just' or 'being healthy' expressed by the adjectival verb ὑγιαίνει ('thrives'), which can be analysed into the participle of this verb and 'is'. The latter case is instanced at 4, 16b30, and 10, 19b37-38 (where 'being just' or 'not being just' etc. are added).<sup>24</sup>

In *Cat.* 4, 2a4-10, it is claimed that in no affirmation are any of the things from the category of substance or from any of the non-substantial categories said just by themselves: on the contrary an affirmation is produced by the combination of these *with one another* (πρὸς ἄλληλα). In the subsequent lines a similar remark is made regarding truth and falsehood, to the effect that even though the finite verbs 'runs', 'wins', when taken in isolation, can surely be analysed into 'is running', 'is winning', they are incapable of producing a statement-making utterance: "For every affirmation, it seems, is either true or false; but of things said without any combination none is either true or false, e.g. 'man', 'white', 'runs', 'wins'". Thus it is plain

<sup>23</sup> At 16b2, the idea of being combined is expressed by the preposition μετά. The passage 10, 20a36 is uncertain on this score. See for all these passages below *ad loc.*

<sup>24</sup> See below *ad loc.* Cf. 11, 21a21, where the 'what is added' (τῷ προσκειμένῳ) refers to the attribute 'dead' assigned to 'being a man' in the composite expression 'being a dead man'.

that the combination 'with one another' (which is said to be required for there to be an expression with truth-value) bears on the fact that previously isolated expressions are now actually applied to some hypokeimenon expressed by an onoma.<sup>25</sup>

It is worthwhile noticing that there being a combination (called συμπλοκή in this connection) *eo ipso* is said to be constitutive of truth and falsehood, for instance 'man runs', or 'man wins' (*Cat.* 2, 1a17-18). A συμπλοκή, then, entails that there actually is 'something one' (έν τι), as is claimed at *Int.* 5, 17a13-14. Now we know from *Met.* what Aristotle understands by έν σημαίνειν: a unity formed by a substratum (ύποκείμενον), which is signified by an onoma, together with its essential or coincidental attributes, referred to by rhemata.<sup>26</sup> And the rhema is that which, as we will be told in chapter 3, actualizes certain forms by assigning them to a substrate. We find this idea often associated with the notion of συμπλοκή. E.g. at *Top.* VII 5, 154b16 it is said that the proprium is usually assigned to its substratum in a combination of concepts (έν συμπλοκῇ). Thus ontologically, συμπλοκή produces essential or coincidental units composed of (various) categorial modes of being, one subsistent, taken from the category of subsistence ('substance'), the others from non-substantial categories. More than once the σύνθεσις of *Int.* is the linguistic device representative of the ontic συμπλοκή discussed in *Cat.*<sup>27</sup>

This idea naturally brings us to those cases in which the addition of 'be' or 'not-be' (and 'is' and 'is not', respectively) is explicitly in order. These cases seem to neatly instance the twofold semantic function (connotative and hyparctic or assertoric)<sup>28</sup> the notion of 'be' has in Aristotle. That is to say, what this notion involves is either connotative being as implied in each occurrence of (whether subsistent or non subsistent) categorial being, but particularly also the (weak) hyparctic 'be' which bears on a (simple or compound)<sup>29</sup>

<sup>25</sup> See below *ad loc.* A corollary to be gathered from this text is that the various attributes which can be taken from the diverse categories, are indiscriminately instanced by adjectives as well as adjectival verbs.

<sup>26</sup> Our section 7.72. Cf. *Int.* 11, 21a5-6: "Clearly, one is led to many absurdities if one lays down without qualification that by simply putting notions together the <intended> combinations (τάς συμπλοκάς) come about".

<sup>27</sup> Sometimes (as in *Met.* E 4) συμπλοκή is used in the grammatico-logical sense of σύνθεσις.

<sup>28</sup> For these labels see below and my section 1.64.

<sup>29</sup> The distinction between 'simple' and 'compound' (or 'composite') is something quite different from that between 'uncombined' and 'combined' discussed before.

thought actually assigned to some hypokeimenon. This actual assignment is what enables the expression to acquire a truth-value, and is preferably expressed by the finite verb 'is' ('is not') added to the expression to frame a fully expanded assertion, in which 'is' or 'is not' acts as the operator in the sense of 'is-the-case' or 'obtains'. I say 'preferably', because in Aristotle's deep structure analysis, adjectival verbs such as 'wins', 'runs', are analysed into 'is' and 'is not' *plus* their participle of the present ('is winning', 'is running').

The concluding remark (16a16-18) about 'goat-stag' should be interpreted along the same lines. While this notion taken in isolation is not meaningless, but signifies something — even though this thing does not exist and even cannot exist, which might lead us into thinking that by itself it is significative of falsehood, and thus possesses a truth-value — it requires, like other onomata, the addition of 'be' or 'not-be' to produce a statement having a truth-value. Aristotle's instancing a notion like 'goat-stag' to make his point is very persuasive indeed, because at first glance this notion by itself seems to include the connotation of non-existence, which could make, it might seem, the addition of οὐκ ἔστι superfluous.

Taking both onoma and rhema, when actually used in a statement, as significative of the connotative 'be' that is naturally included in them, any fully-fledged assertion may be understood as containing the notion 'be' in its two forms, that is to say, both connotative and assertoric. On this interpretation, ἄνθρωπος ('being a man') and λευκόν ('being pale-complexioned'),<sup>30</sup> when 'something' is added, occur as the component parts of utterances like 'a (the) man is', 'a (the) pale <entity> is', or 'a (the) pale man is' ('a (the) man is pale'). According to our alternative semantic model,<sup>31</sup> this analysis can be noted as follows:<sup>32</sup>

(1) 'Is: [(man)'s be-ing]',

meaning (in our parlance) 'it is the case that there is a man' or 'it is the case that [x] is a man'.<sup>33</sup>

<sup>30</sup> In both expressions the 'being' is meant as connotative; my section 1.64.

<sup>31</sup> For this model see my section 2.13.

<sup>32</sup> In this notation the 'be-ing' occurring in the '[assertible]' and acting as the container of the preceding categorial mode(s) of being, is connotative, while the (strong) hyparcutic 'be' is represented by the operator 'Is' = 'Obtains'.

<sup>33</sup> The latter interpretation holds in cases in which the appellation 'being a man' is assigned to something given, in that an [x] under discussion is identified as an instance satisfying the concept 'man' or its definiens. For this identification process (ὁρισμός) see my sections 6.53-6.57. — Notice that in *our* (modern!) formula there are two different uses of 'is'.

(2) 'Is: [(something-pale)'s be-ing]',  
 meaning 'it is the case that there is something pale' or 'it is the case that  $[x]$  is (something) pale'.

(3) 'Is: [(man&pale)'s be-ing]',  
 meaning 'it is the case that there is a pale man' or 'it is the case that  $[x]$  is a pale man'.

In a similar way utterances about fancy things may be framed, like

(4) 'Is: [(goat-stag)'s being]',  
 meaning 'it is the case that there is a goat-stag or 'it is the case that  $<[x]>$  is a goat-stag'.

The same analysis can be applied to negations and denials,<sup>34</sup> and expressions using other tenses.

The different wording of *Int.* 5, 17a11-12, containing the finite verb ἔστι as opposed to that found in the parallel passages, where the notion 'be' is expressed by the infinitive εἶναι, should not lead us astray. Whether it is expressed by the infinitive or the finite verb, the addition of 'be' indiscriminately includes the connotative and the assertoric 'be', because, when speaking about certain assertions, Aristotle frequently brings them up in the form of an assertible.<sup>35</sup> That at 5, 17a11-12 there is evidently talk of the assertoric operator ἔστι as 'that which is added' should not come as a surprise, since from 17a9 onwards, it is precisely the λόγος ἀποφαντικός ('statement-making utterance' qua assertion) that is introduced, so that the connotative 'be' included in the assertible is no longer in the focus of interest.

### 3. 24 *On time-connotation and timelessness*

Our fourth item raised above, which concerns Aristotle's qualification 'either simply or with reference to time', calls for a separate discussion. It is in fact a qualification of the element 'be' and should in the present context be taken to mean that the concept 'man' (or '\*the pale' or 'goat-stag') by itself is a meaningful expression, but is not susceptible of truth-values until the notion 'be' in one of its possible forms is added, thus: 'man's etc. simply being' or 'man's etc. simply not being', or, with reference to time: 'man's etc. being now',

<sup>34</sup> Where the negations concern the assertibles, and the denials the operators.

<sup>35</sup> E.g. *Int.* 12, 21b3-5, whereas Ackrill rightly claims (150f.) that the — at first glance — strange argument about the log is proof that one must take the examples to be infinitival phrases ('assertibles'), not indicative sentences, the real issue at hand being the distinction between applying and not applying assertibles. For this important issue see my sections 2.16; 3.66.

'man's etc. having been in the past', 'man's etc. being in the future'; and similarly their negations. There seems to be no cogent reason why this remark about the possible time indications should not equally apply to the connotative 'be' conveyed by the terms used in the construal '[...]', which serves as the assertible or 'operandum' of the operator 'is' ('is not'), so as to produce assertibles such as '[Socrates's having been pale in the past]'.

Although the general idea conveyed in Aristotle's phrase ἢ ἀπλῶς ἢ κατὰ χρόνον ("either simply or with reference to time") seems straightforward enough, there are commentators who are not happy with the way in which Aristotle expresses himself. Ackrill, who is followed by Weidemann and others, prefers the common explanation of this phrase in terms of the opposition 'present time vs. past and future times' to taking ἀπλῶς to allude to the (intensional) timeless or to the (extensional) omnitemporal present tense. Yet he feels that the distinction between present time and past and future times "would not be very happily expressed by the disjunction 'either simply or with reference to time'."<sup>36</sup> In other words, Ackrill's interpretation fails to account for the fact that Aristotle should use precisely this expression, and not some other, more adequate one.

In fact, the phrase offers a helpful clue for understanding his semantics of terms. The same phrase is also used at *APr.* I 15, 34b7-8 and, somewhat modified, at *Top.* I 5, 192a22-30 and *An.* III 10, 433b5-10. To my mind, these parallel passages provide some unmistakable clues to the alternative interpretation of this phrase rejected by Ackrill, to the extent that this phrase really refers to the opposition between time-connotation and timelessness.<sup>37</sup>

To begin with, some preliminary remarks should be made about Aristotle's use of the word ἀπλῶς ('simpliciter').<sup>38</sup> Aristotle defines it on two occasions. At *Top.* II 11, 115b29-35, its use is described by the claim (b29-30) that "what is honourable *simpliciter* is that which without any addition you are prepared to say is honourable." The honourable *simpliciter*, e.g. to honour the gods, is opposed to what is honourable to some people, such as to sacrifice one's own father, which is only honourable *secundum quid*, that is to say in some places,

<sup>36</sup> Ackrill, 115. Whitaker rather easily assumes (69) that "there is no additional element of time contained in thoughts about the present".

<sup>37</sup> Weidemann adduces (157) only *APr.* I 15, 34b7-8, but does not regard it as a parallel.

<sup>38</sup> For its counterpart ὅλως see my *Index*.

e.g. amongst the Triballi, a Thracian people near the Danube. A similar opposition between *simpliciter* and *secundum quid* is also found elsewhere.<sup>39</sup>

Still another definition of the word occurs at *GCI* 3, 317b5-7: "The word 'simpliciter' either refers to what is primary, regarding any appellation of what is (καθ' ἐκάστην κατηγορίαν τοῦ ὄντος), or to the universal in the sense of 'all-comprehensive' (τὸ καθόλου καὶ τὸ πάντα περιέχον)."<sup>40</sup> What Aristotle is trying to say is that in any appellation<sup>41</sup> according to one of the ten categories of being, if the word ἀπλῶς is added it indicates that the categorial term focusses *either* on the substratum (ὑποκείμενον) underlying the mode of being signified by it (e.g. the substrate 'man' underlying, say, paleness,) — a denotatum which is primarily referred to in any instance of naming — *or* on this mode of being by itself as universally belonging to the whole class of substrates underlying this universal property.<sup>42</sup> So if we take the example of λευκόν, the phrase τὸ λευκὸν ἀπλῶς means *either* 'the white thing' *or* the property 'whiteness'.<sup>43</sup>

In this alternative definition of the notion ἀπλῶς there is thus a shift from 'in an unqualified sense' to 'essential' or 'by nature'. So the juxtaposition of ἀπλῶς to φύσει, which is not uncommon in Aristotle,<sup>44</sup> is not surprising. The alternative sense of ἀπλῶς clearly occurs where (*APo.* I 2, 71b34-72a5) the requirements for the premisses of an epistemonical proof are discussed. In this context Aristotle remarks that they should depend (ultimately) upon primitive truths which are "prior and more familiar", not in the sense that they are closer to us and, accordingly, nearer to sense perception, but by nature, *simpliciter* (ἀπλῶς) and far away from sense perception.<sup>45</sup>

<sup>39</sup> E.g. *SE* 5, 166b22-167a20; 6, 168b11-16; 25, 180a23-31; *Phys.* I 1, 184a18; I 7, 190b 2 ("substances, i.e. anything that can be said *to be* without qualification"); *GC.* I 3, 317b2-5; b11-13; *Met.* Δ11, 1018b11; *Z.* 3, 1029b6.

<sup>40</sup> Cf. Bemelmans (1995), 169-75.

<sup>41</sup> For the key notion κατηγορία (= 'name' or 'appellation/nomination' rather than 'sentence predicate' see De Rijk (1980) and (1988) *passim*, and my sections 2.11; 4.14.

<sup>42</sup> In the sense of 'all-comprehensive' the phrase '(stone) ἀπλῶς' means the class (of all stones.)

<sup>43</sup> E.g. *Top.* III 5, 119a30-31: "[...] the definiens of 'white' is 'a colour which makes vision discern <the object from something else>". Cf. the ambivalent use of adjectival terms in Plato; De Rijk (1986), 44ff and our rule RMA (section 1.71).

<sup>44</sup> Bonitz, *Index*, 839b2-4; cf. *ibid.*, 77a50-2: "per vocem ἀπλῶς ab enumeratis singulis [...] ad universale transitur (cf. ὅλως)"; next follow references to *APr.* I 24, 41b32, I 46, 52a39, II 23, 68b12, *Top.* IV 4, 124b31. For the difference between ἀπλῶς used intensionally and ὅλως used extensionally see our *Index*.

<sup>45</sup> *APo.* I 2, 71b33-72a5: "Things are prior and more familiar in two ways: for it is

In *Top.* VI 4, we find a similar association of true definition (through genus and differentiae) with a thing's essential nature (141b24), which is "prior *simpliciter* and requires exceptional understanding to be grasped" (141b13-14).

The word ἀπλῶς also occurs in *Cael.* I, 9 where Aristotle discusses the contradistinction between something's shape (μορφή, which term, as often, is used as an equivalent of εἶδος) in itself and the one in combination with matter. This distinction is telling, Aristotle argues, since e.g. the form (as such) of the sphere is one thing and the golden or bronzen sphere is another; for when we state the quiddity or bare form (τὸ τί ἦν εἶναι) of the sphere we do not include its material in the definiens (λόγος), because it does not belong to its essence.<sup>46</sup> Now if the universe is a particular, there will still be a distinction between the being of 'the particular universe' and 'universe' taken by itself (ἀπλῶς i.e. *qua* εἶδος). So there is a difference between 'this universe' (i.e. ours) and 'universe taken *qua* εἶδος'; the latter stands for form and shape (εἶδος καὶ μορφή), the former for a form that is enmattered.<sup>47</sup> In *Phys.* VIII 7, 261b4-5, where Aristotle talks about becoming and passing away, he makes a similar opposition between their being as such (ἀπλῶς) and their being instantiated in particulars (καθ' ἕκαστον).

The general idea in all these passages is that the phrase '[x] taken ἀπλῶς' stands for an entity irrespective of its being instantiated in matter, and that its counterparts<sup>48</sup> stand for [x] as instantiated in matter. Now any material instantiation — one must keep in mind that to Aristotle, anything real *is* instantiated in matter<sup>49</sup> — is temporal. Therefore the notion of ἀπλῶς naturally comes close to that of timelessness.<sup>50</sup>

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not the same to be prior by nature and prior in relation to us, nor to be more familiar <*simpliciter*> and more familiar to us. I call prior and more familiar in relation to us what is nearer to sense perception, prior and more familiar *simpliciter* what is further away. What is most universal is furthest away, and the particulars are nearest; and these <two kinds> are mutually opposite".

<sup>46</sup> For the doctrinal context of the issue of whether or not a thing's definiens should include matter, and the two kinds of definiens see my sections 9.52; 9.64.

<sup>47</sup> *Cael.* I 9, 277b31-278a15.

<sup>48</sup> viz. '[x] κατὰ μέρος', '[x] μεμιγμένον', and so on.

<sup>49</sup> *Cael.* I 9, 278a11: "whatever is sensible subsists altogether in matter."

<sup>50</sup> Ackrill, 115 also, considered (but rejected) the suggestion that ἀπλῶς "alludes to the timeless or to the omnitemporal present tense." Bonitz, *Index*, 77a19-21 refers to *APr.* 15, 34b8 and 18, *Top.* I 5, 102a25, and *An.* III 10, 433b9 for other instances of ἀπλῶς (as opposed to ποτέ, κατὰ χρόνον, νῦν, ἤδη). Cf. *ibid.*, 77a50-51: "per vocem ἀπλῶς ab enumeratis singulis, τοῖς καθ' ἕκαστα, ad universale



In point of fact, one sometimes finds that the notions of ἀπλῶς and ‘universality’ are opposed to the temporality of particular instantiations. Thus when he discusses the nature of the universal syllogistic premiss (e.g. ‘A belongs to all B’), Aristotle explains (*APr.* I 15, 34b7ff.) that we must understand the phrase ‘belonging to all of a subject’ not with reference to any time (μὴ κατὰ χρόνον ὀρίσαντας), but ἀπλῶς, hence ‘timeless’, for that is the way to grasp the material genuine syllogisms are made of. The author insists that in such cases “universality must be taken simply”, that is, not limited in terms of time.<sup>51</sup> The phrase οὐ χρόνῳ διορίζοντας at 34b18 seems to rule out time and temporal instantiation and to imply timelessness, rather than merely temporal indefiniteness or omnitemporality (‘at all times’). To Aristotle of course, unlike Plato, the notion of timelessness does not entail a transcendent domain of being. In his view, this notion is merely instrumental in *our conceiving* the things of the outside world, viz. our taking (at times, e.g. when framing apodeictic syllogisms about them) their immanent natures as abstracted from these natures’ inherence in these things, in order to draw, and to justify, non-contingent conclusions about them.<sup>52</sup>

Aristotle’s remark at 16a18 (‘either simply or with reference to time’) should be interpreted along the same lines, i.e. in terms of timelessness vs. temporality. What he means to say is that the ‘being’ added to verbal expressions or thoughts, which provides them with a truth-value, may either be the timeless being which belongs to the connotatum of the term involved, or it may refer to temporal instantiations and instances.<sup>53</sup> Thus statements of various content may be made.<sup>54</sup>

transitur”.

<sup>51</sup> *APr.* I 15, 34b17-8: τὸ καθόλου ληπτέον ἀπλῶς καὶ οὐ χρόνῳ διορίζοντας.

<sup>52</sup> Cf. *An.* III 7, 431b12, where ἀπλῶς is opposed to τινί as a ‘universal state of affairs to a particular one’. At *Phys.* II 2, 193b33-34 it is implied that a thing’s εἶδος is separable in thought; at IV 2, 209b22-23 it is said that it is not physically separable. To Aristotle, any epistemonik inquiry starts from particulars of the outside world, but they are always taken, then, as instances of the universally applicable nature(s) immanent in them. Therefore the ‘ἀπλῶς -consideration’, by which they are taken *simpliciter* or detached from their materializations, is of utmost importance for the epistemonik inquiry. See De Rijk (1995), 78-102, and my present sections 2.56; 2.62, and 9.62; 9.65 in Vol. II.

<sup>53</sup> ‘Manhood’ and ‘triangularity’ are ‘instantiations’ inhering in the ‘instances’ ‘man’ and ‘triangle’, respectively.

<sup>54</sup> Cf. *Poet.* 1457a16-18, where Aristotle says that ‘man’ and ‘pale’ do not signify a ‘when’ (i.e. that their significates are involved in temporal conditions), whereas ‘walks’ or ‘have walked’ involve in addition to the notion of walking that of time present or time past, respectively. See also the opening lines of the quotation from

Finally, this interpretation will find some additional support in Aristotle's discussion of *rhema*, which in chapter 3 of this treatise is said to "additionally signify time".<sup>55</sup>

Our question about Aristotle's use of the vague phrase 'when something is added' can now be answered. This phrase indiscriminately covers the addition of a mode of being from one of the non-substance categories like 'being just', 'being tall', 'being a slave', 'being on the market-place', and so on — which are all meant to actualize a coincidental mode of being attached to a *hypokeimenon*, which by the same token is taken to be in actual existence — as well as the mere operator in any of its tenses. As for our question about Aristotle's use of the infinitives εἶναι and μὴ εἶναι at 16a16-17, the answer is obvious now: the infinitives represent the operator in all tenses, present, past, and future.

### 3. 25 *The semantics of naming.* "ὄνομα defined

In the opening line of the treatise, Aristotle had announced (16a1-2) that it was necessary to settle (θέσθαι) what ὄνομα, ῥῆμα, and λόγος etc. stand for. In ch. 2, 16a19, he starts the discussion concerning the first component of the statement-making expression, which is called ὄνομα. In the wake of Plato, Aristotle uses ὄνομα to stand for a one-word expression, or 'significative word', always with the strong connotation of 'representative of' some thing (whether connotatively or denotatively).<sup>56</sup> It may be rendered 'name' in English, in the general sense of 'designator'. Its semantic function is to indicate something and to bring it up for discussion, while syntactically it is a

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Boethius in my note 55.

<sup>55</sup> The first of the three explanations of our phrase mentioned by Boethius (IIa, 51<sup>2-10</sup>) seems to come very close to the one argued for above: "[...] vel simpliciter vel secundum tempus. Hoc vero idcirco addidit quod in quibusdam ita enuntiationes fiunt ut quod de ipsis dicitur, secundum substantiam proponatur, in quibusdam vero hoc ipsum 'esse' quod additur, non substantiam sed praesentiam quandam significet. Cum enim dicimus 'Deus est', non eum dicimus nunc esse, sed tantum in substantia esse, ut hoc ad inmutabilitatem potius substantiae quam ad tempus aliquod referatur." Cp. Trendelenburg (*Elementa logices aristotelicae*. Berlin 1892), 53: "ἀπλῶς simpliciter eam affirmationis vel negationis necessitatem indicat, quae quasi tempore maior omni tempore dominetur; cuius modi genus praesenti efferre solemus; κατὰ χρόνον contra enunciatum certo quodam tempore cohibet."

<sup>56</sup> For Plato's semantics of ὄνομα and ῥῆμα see De Rijk (1986), 217-82; (1987), 27-33; 53. It should be remarked that in these passages, my unfortunate rendering 'imitation' and 'to imitate' for μίμησις and μιμείσθαι should be corrected into 'representation' and 'to represent'; see Kardaun (1993) and (2000), 137-43.

'substrate-expression'. It usually refers to something definite in the outside world, and may also be used to stand for something merely conceived of, like 'goat-stag', if it is brought up as something quasi-subsistent.

"ὄνομα is defined and its use explained as follows:

*Ibid.* 2, 16a19-29: A name, then, is (1) an utterance (2) significant (3) by convention, (4) without time-connotation, (5) no part of which is significant in separation. For in 'fair-horse'<sup>57</sup> the 'horse' does not signify anything in its own right, as it does in the phrase 'a fair horse'. Not that it is the same with compound names as with simple ones: in the latter the part is in no way significant, in the former it has some force but is not significant of anything in separation, e.g. the 'boat' in 'pirate-boat'.<sup>58</sup>

The characteristics of the name imply that it is (1) an utterance, (2) significant, (3) significant by convention, (4) signifying without time, (5) something no part of which is significant in separation. The ingredients (1) and (2) are quite in line with what is said in the opening chapter, and (3) alludes to the expositions in Plato's *Cratylus*.<sup>59</sup> The purport of this remark, which is explained by referring to natural signs as are the inarticulate, unspellable noises made by beasts, seems to be that to be significant, the utterances should have been adopted as tools for communication in the human universe of discourse.

From the semantic point of view the *differentiae* indicated by (4) and (5) are the most interesting, because they are meant to mark off ὄνομα against ῥῆμα and λόγος. (Following Aristotle, I will postpone the explanation of phrase (4) 'without time' to the next section). With feature (5) Aristotle only intends, I think, to contrast the name — as at 3, 16b6-7 the rhema — qua one-word expression with λόγος,

<sup>57</sup> Whitaker's rendering (1996, 38-45), the Greek text reading Κάλλιπος. He convincingly argues (40f.) for Aristotle meaning to say that 'horse' has no independent signification as a part of the compound word 'fair-horse', but does as a part of the phrase 'fair horse'. Once a word becomes an element in a compound, it loses its independent signification and only contributes to the compound's signification. Compare the analogous phenomenon of sememe fusion in phrases like 'good cobbler' (*Int.* 11, 20b31-37).

<sup>58</sup> Cf. *Poet.* 20, 1457a10-14; *Sens.* 1, 437a14-15: "Each word is significative" ('is a token'; σύμβολόν ἐστιν); cf. *An.* II 8, 420b32-33: "For the utterance (φωνή) is a significative sound (σημαντικός γὰρ δὴ τις ψόφος) and is not merely indicative of air inhaled, as cough is". Apparently, in ἐπακτροκέλης the κέλης is supposed to have lost its proper meaning ('fast-sailing yacht'). Cf. Ackrill, 116f.

<sup>59</sup> For the semantic impact of this dialogue see De Rijk (1986), 217-53. In fact, in this passage Aristotle does not enter into the main Platonic theses of the *Cratylus*, but only argues for linguistic conventionalism.

because when taken by themselves, their parts ('letters') — unlike those of λόγος — are semantically incomplete and, accordingly, do not fulfil the requirement of being properly significative.<sup>60</sup>

Expressions such as 'not-man' are of a special kind. They are not genuine names, nor are they a λόγος (phrase or assertible) or a (negative) statement or assertion. On the other hand, they *are* significant by themselves, the only difference from ordinary names being that they indicate only a vague, infinite connotatum<sup>61</sup> and may denote, consequently, "a wildly various range of objects".<sup>62</sup> So they are not entirely denied the label 'name' and are called by Aristotle 'infinite names' (16a29-32).<sup>63</sup>

Finally, Aristotle rules out (16a32-b5) that the inflexions of names (i.e. oblique cases of nouns, such as 'Philo's' or 'to-Philo') should be counted as names. They do not bring up the entity signified by the name properly, as e.g. 'Philo's' may primarily refer to his wife, or a son or daughter of his, or one of his possessions or properties, anything other, that is, than the man himself. That is why only the name in the nominative case can be called κλήσις i.e. 'calling case', because that is the case which, unlike the other ones, straightforwardly calls up for discussion the very thing signified by the nominative, and not some other thing that only has some relationship to the former. Thus in *APr.* I 36, 48b39-49a1, Aristotle claims that the terms of the syllogism are always to be stated in "the calling-up-forms of the names" (κατὰ τὰς κλήσεις τῶν ὀνομάτων), e.g. 'man', 'good', 'contraries', not: 'of-man', 'of-good', 'of-contraries', since by the latter not man etc. himself, but something else related to man etc. is brought up.

Summing up the main outcome of this chapter, the proper semantic task of the onoma is to bring up a thing (in fact, a hypokeimenon as an instance of the particular mode of being signified by names),

<sup>60</sup> Weidemann, 166.

<sup>61</sup> See *Int.* 10, 19b9: "for what it signifies is in a way one thing, but indefinite." Obviously, when actually used, its denotatum may be quite precise, e.g. in '*this* not-man is a tree'.

<sup>62</sup> Ackrill, 118. See also Boethius ed. IIa, pp. 62<sup>3-19</sup>; 69<sup>29-70</sup><sup>3</sup>.

<sup>63</sup> Boethius IIa, 62<sup>19-63</sup><sup>14</sup>. For Plato too the indefinite name has a descriptive force. See De Rijk (1986), 165ff.; 170ff. The Greek text in Ammonius (both in the lemma and in the comments) wrongly adds "holding indifferently of existents and non-existents" as another property of indefinite names. This so-called 'Ammonii recensio' — which in fact merely resulted from an interpolation from 16b15, where this property is rightly assigned to the indefinite rhema — and the history of its influence on the development on Aristotelico-Boethian logic is discussed in De Rijk (2001) and (2001a), where Boethius's liability in general is taken into consideration.

and by doing so, to enable us to frame assertibles, and consequently assertions about it. Quite naturally then *onoma* is sometimes (e.g. 10, 19b11ff. and 20a2-3) explicitly spoken of in terms of its syntactical function of serving as the ‘topic’ constituent of the statement-making utterance, alongside the *rhēma* in its capacity of ‘comment’ constituent.<sup>64</sup>

### 3. 26 *The semantics of verbal or nominal attribution. Rhēma defined*

Apart from the assertoric *ēsti* most simple utterances are composed of a substrate term (*ōnoma*) accompanied by an attributive designation or determination. The determinative function falls to the *rhēma*. As a technical tool *rhēma* (literally ‘what is said’ or ‘assignable’) is defined in the opening lines of chapter 3:

*Int.* 3, 16b6-7: By *rhema* <on my use of the term> is the one meant (1) that additionally signifies time, (2) no part of which is significant separately, and (3) which is<sup>65</sup> always significative of things which are said of something else.

It must strike the reader that the first part of the definition of *lógos*, which will be presented by Aristotle in chapter 4, runs entirely parallel to the definition of *ōnoma* featuring in the previous chapter, in that each of them commences with their common generic part, viz. ‘a significant utterance which ...’. What Aristotle says here about *rhema*, however, does not start from that generic part; rather he *posits* — one has to recall the use of *thés-thai* at 16a1, and its being alluded to at 19b14<sup>66</sup> — *rhema* as “the one (sc. *rhema*) which ... etc.”<sup>67</sup> This

<sup>64</sup> In light of their complementary syntactical functions, Arens goes as far as to render (1984, 24) *ōnoma* and *rhēma* ‘subject’ and ‘predicate’. These labels, however, are too exclusively associated with assertions in the form of (post-Aristotelian) copula construals. For my rendering of *ōnoma* ‘name’ (semantically) indicating a significate or semantic value, whether subsistent or non-subsistent, and its syntactical function of designating the topic (usually the substratum) underlying the property or state expressed by the ‘what-is-said’ of it, see my sections 2.2; 2.35; 4.14; 4.2.

<sup>65</sup> The Greek language does not allow the connection of more than one relative clause with an antecedent and, consequently, has the paratactic construction *ēsti dé* (‘and it is’). See Kühner-Gerth II, 432f. Besides, the symmetry of the chapters 2-4, in which the definitions are followed by the explanations of the various elements, clearly indicates that the line 16b7 is an integral part of the definition. For this reason Whitaker rightly regards (1996, 37, n. 2) Bekker’s comma at 16b7 preferable to Minio-Paluello’s colon.

<sup>66</sup> At 10, 19b14 Aristotle qualifies the notion of *rhema* by saying “*rhemata* according to what we laid down”.

<sup>67</sup> Note the use of the definite article (*τὸ προσσημαίνον*). It is worthwhile observing that Boethius finds it useful to begin his comments on this lemma by

wording strongly suggests that Aristotle is not defining rhema in general, but instead identifies the rhema as intended in the present treatise as “the one which additionally signifies time, no part of which ... etc.”. Quite understandably so, because unlike Aristotle’s, Plato’s rhema is not necessarily a one-word expression,<sup>68</sup> so that the latter’s concept of rhema does not meet the second condition mentioned (“no part of which is significant in its own right”) for being a rhema in the sense Aristotle has determined just now.

The features (1) and (3) are interesting from the semantic point of view. As to the first one (‘to additionally signify time’), Aristotle explains (16b8-9) this by opposing two cognate words, both of which express the same notion, ‘health’, one as a name, the other as a rhema:

*Ibid.*, 16b8-9: By ‘additionally signifying time’ I mean this: ‘health’ (ὑγίεια) is a name, but ‘thrives’ (ὑγιαίνει) a rhema, because it additionally signifies something as obtaining *now*.”

The author apparently intends to say that as a name ὑγίεια refers to the entity ‘health’, but does so in bringing it up qua form only, whereas ὑγιαίνει always refers to health as a form qua *actually inhering* in some substratum, hence as a form that is enmattered or actualized and manifests itself in temporal conditions. In accordance with the basic tenets of Aristotelian philosophy, a form can only be existent if it is enmattered in something else which acts as its hypokeimenon.<sup>69</sup> In fact, the rhema adds time-connotation to the semantic value it has in common with the corresponding onoma.<sup>70</sup>

The fact that a form is always instanced in a substratum does not mean, of course, that we cannot refer to forms by themselves (even including Plato’s putative transcendent Forms). For that matter, Aristotle’s vivid discussion with Plato about his Master’s Separate, Transcendent Forms, as well as his own reflections about true ousia

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presenting the “integra definitio” including the generic part common to nomen, verbum, and oratio (IIa 66<sup>3-6</sup>: “Verbum est vox significativa secundum placitum, que consignificat tempus ... etc.”). Thomas Aquinas tries to explain this by remarking (*In Perih.*, nr. 75) that Aristotle omits the generic part “studens brevitati, ne idem frequenter iteraret”. Ammonius, however, is not satisfied by such an explanation (CAG IV-5, p. 47<sup>18ff.</sup>), since another part of the definiens of ὄνομα is repeated.

<sup>68</sup> See De Rijk (1986), 222-34.

<sup>69</sup> This can be gathered from *Cael.* I 9, 278a10-11. For ὑποκείμενον = ‘substratum’ see my section 4.23.

<sup>70</sup> *Pace* Benveniste (1966, 152f.), who deems this difference unacceptable to the linguist. It is not surprising that this criticism is found in the section ‘Fonctions syntaxiques’.

in *Met.*, could not possibly take place without bringing up 'forms as such' in *abstracto*.<sup>71</sup> Now in such discussions, names designate entities regardless of their being enmattered in temporal substrates ('without time'), whereas by using rhemata this ontological state is implied, and may even be focussed on.

The third feature ('is always significative of things that are said of something else') is the syntactical counterpart of the first, semantic one. Whereas the first raises the question of an entity's ontological status as something that is involved in temporal conditions qua being immanent in a substratum, the third refers to the corresponding semantic situation, namely that in keeping with this ontological status, the entity is also examined inasmuch as it is assignable or actually assigned as an attribute to the substratum it inheres in.<sup>72</sup> Thus Aristotle implicitly presents his basic view — opposed to that of Plato — that what is signified by a rhema is a non-subsistent entity.<sup>73</sup> So a rhema always implies a reference to the subsistent substratum its semantic value or significate inheres in.<sup>74</sup> Quite naturally, then, these two features of rhema are explained by Aristotle as being closely related.<sup>75</sup>

Next Aristotle proceeds to deal with two kinds of rhema-like expressions which, because they do not completely meet the requirements for being a rhema, are not entitled to bear the label properly, viz. negative expressions such as οὐχ-ὕγιαίνει, and the inflexions of rhema, to wit its past and future tenses. He proposes to call the former ὁρίστα ῥήματα. Though they have time-reference and their significates include a connotation of temporality and their always holding of something else, they are different and can only be classed as rhemata in a qualified sense.

<sup>71</sup> The abstraction (or rather subtraction) procedure plays an important role in assessing the position of matter and material constitution in *Met.* For Aristotle's deliberate rejection of tenseless statements see Sorabji (1983), 50f.

<sup>72</sup> Although the addition (at 16b10) ἢ ἐν ὑποκειμένῳ (found in Porphyry and some of our manuscripts, and defended by Montanari (1988, 193-9) is perhaps not authentic, it is perfectly in keeping with what Aristotle has in mind in this chapter.

<sup>73</sup> This also plays a role in Aristotle's view of the transposition of names and attributes in *Int.* 10, 20b1ff.

<sup>74</sup> The aforesaid two conditions are explained by Boethius (IIa, 66<sup>9-22</sup>; 67<sup>7-21</sup>; 68<sup>1-31</sup>) along the same lines.

<sup>75</sup> "[...] because it additionally signifies something as obtaining now, and is always a sign of what is said of something else, that is, of a substratum" (16b9-10), reading, with a number of manuscripts (and Porphyry), καθ' ἑτέρου λεγομένων instead of ὑπαρχόντων (Minio-Paluello). See Weidemann, 173.

Modern commentators have different ideas about the precise meaning of the label ὀρίστον ῥῆμα. Ackrill considers it a ‘misnomer’.<sup>76</sup> Admittedly, Aristotle’s account (at 16b15) is rather obscure:

*Ibid.*, 16b11-15: To \*‘not thrives’ (τὸ δὲ οὐχ ὑγιαίνει) and \*‘not labours’ (τὸ οὐ κάμνει)<sup>77</sup> I do not assign the label ‘rhema’. For though they additionally signify time and always hold of something, <there is a difference>;<sup>78</sup> but for the difference there is no name. Let us call them ‘infinite rhema’, because they hold indiscriminately of anything, whether being or not being.

Akrill and Weidemann are of the opinion that the infinite rhema is in fact a sentence-fragment, containing an ordinary rhema together with the negative particle, which serves to make the statement it is part of a negative one, a denial in fact.<sup>79</sup> However, I believe this interpretation is too narrow. One should leave open the possibility that in this context it is the indefinite rhema taken by itself, and not as the sentence fragment Aristotle is talking about, this in a similar way as he understands the indefinite onoma. This is the more likely as there are good reasons to assume that statement-making is not in the focus of Aristotle’s interest until chapter 4, and in chs. 1-3 its constituents, onoma and rhema, are examined precisely apart from their being involved in any statement-making.<sup>80</sup> Therefore I prefer to take ὀρίστον ῥῆμα in a way analogous to ‘infinite name’.<sup>81</sup> On this assumption, it must refer to an expression that equals an ordinary rhema, save for the latter’s definite way of referring to the significate involved. The infinite rhema then signifies some kind of being in an infinite manner, for instance, ‘not-thriving’ (16b11) or ‘being not-just’ (20a31). One should be aware that just as in the case of infinite names, the designation is not empty, but really has a semantic value,

<sup>76</sup> Ackrill, 120; also Weidemann, 177.

<sup>77</sup> Whitaker *ad loc.* — Not being a native speaker of English, the present author is insolent enough to often make use of such poetic archaisms as ‘not thrives’ — and even of barbarisms like \*‘the pale’ (for ‘the pale entity’) —. It is in fact sometimes the only way to obtain a notation which matches the Greek expression as closely as possible, in order to prevent misunderstandings. For the present archaism see *Oxford English Dictionary*, s.v. ‘Not’.

<sup>78</sup> I agree with the common interpretation of this passage, but to my mind, it is necessary to remedy the harsh construction by supplying (at b13, after ὑπάρχει) the words διαφέρει δ’, which may have been omitted owing to haplography.

<sup>79</sup> Ackrill, 120-1; Weidemann, 177. See also p. 18 below. Whitaker too is of the opinion (66) that an indefinite verb makes a negative assertion.

<sup>80</sup> This feature will play the decisive role for the correct interpretation of the second part of ch. 3.

<sup>81</sup> De Rijk (1996), 127f. ; cf. the same (2001).



despite the minimal information it contains. The information offered by the infinite rhema is so vague even that the attribute involved “can be said of things that *are* and things that *are not*, indiscriminately”, meaning that e.g. ‘not thriving’ and ‘not being just’ may stand for any existent thing that lacks health or justice, as well as for what does not exist at all.

This analysis of ἁόριστον ῥήμα precisely reflects the double meaning of ἁόριστον occurring elsewhere in Aristotle. In his discussion in *Phys.* II 5, 196b23ff. of the different ways in which a thing’s cause may be indicated, the author distinguishes the (determinate) *per se* designation from the plurality of indeterminate, coincidental ones. For instance, the cause of a house (the architect) may be *per se* designated as ‘housebuilder’ or by one of the man’s coincidental attributes such as \*‘the pale’ or ‘the physician’. In the latter case, the cause is an indefinite one (ἁόριστον, 196b 28), not qua cause, but in the way it is referred to. In *Phys.* V 1, 225a20-25, Aristotle makes use of both senses of the indefinite term ‘not-being’, which may stand for unqualified non-being (‘what-is-not’), as well as ‘what-is-not’ taken in a certain sense, viz. ‘what is not-white’ or ‘what is not-good’.

In my view, it is wrong to assume that the phrase ‘holding indiscriminately of what is and what is not’ should bear on the existence or non-existence of the subject of the sentence in which the infinite rhema is actually used, as it is commonly taken.<sup>82</sup> Instead I would claim that the phrase only says something about the applicability of the infinite rhema’s own significate itself, irrespective of its actually occurring in a sentence.<sup>83</sup> Of this significate it is said that it either applies, or does not.<sup>84</sup> In this connection it should be kept in mind that in chapters 2 and 3, Aristotle is discussing onoma and rhema taken by themselves as *potential* ingredients of a statement-making expression,<sup>85</sup> and thus focusses on the things they refer to, each in

<sup>82</sup> Ackrill, 120f.; Weidemann, 177; Whitaker, 66, all of whom do so, owing to their sticking to the ‘S is P’ construal, it seems. See also my next note.

<sup>83</sup> Their mistaking the indefinite rhema is mainly due, I think, to their taking it as a sentence-fragment, instead of an attribute which, on occasion, may feature (and indeed often features, admittedly) as part of a statement — though not one of the well-known ‘S is P’ form, as will be shown presently.

<sup>84</sup> Therefore, the reference made by Ackrill, 120 and Weidemann, 177 to *Cat.* 10, 13b27-35, where it is said that if Socrates does not exist ‘Socrates’s being not sick’ is true, seems to be beside the point.

<sup>85</sup> The basic difference between *Cat.* and *Int.* being that, in the former, νοήματα (or notions signified by ὀνόματα or ῥήματα) are examined quite apart from any combination (2, 1a18; 4, 1b25), whereas in the latter they are studied in their

their own *specific* way. Of course, to determine what in accordance with their specific nature, each of them contributes to the phrase (λόγος), and the statement-making expression (λόγος ἀποφαντικός) when “‘is’ or ‘is not’ is added” (5, 17a11-12) remains the ultimate aim of the observations made in these chapters. But for the time being onoma and rhema are discussed in their own right.

The other candidates for the label ‘rhema in a qualified sense’ are verbal inflexions:

*Ibid.*, 16b16-18: Similarly, ‘thrived’ (or ‘will thrive’) is not a rhema, but an inflexion thereof. They differ from the rhema in that the latter additionally signifies the present time, they the time outside the present.

In fact, they do fulfil the condition of being said of something else, but fail to meet the requirement of holding *now*, that is, at the time of the utterance, since they refer to the inherence of the characteristic in the past or the future.<sup>86</sup> Ackrill is right in pointing out that the opposition of the inflexions of the rhema to the ordinary rhema is not at all parallel to that between names and their inflexions. Unlike name inflexions, which do not refer to what the name taken as semantic value stands for and only connote it indirectly, i.e. through the relationship expressed by the oblique case, the inflexions of the rhema really refer to the same entity as the rhema itself, albeit with a different time-reference.<sup>87</sup> However, this is quite natural, since it all depends on the basic difference between the onoma as distinctively signifying a subsistent mode of being (hypokeimenon) and the rhema as referring to just the hypokeimenon’s coincidental mode of being.

### 3. 27 *Ρῆμα opposed to ὄνομα*

From as early as Late Antiquity, the remaining part of the chapter has been the subject of continuous debate, and quite naturally so. To even a greater extent than he usually does, Aristotle contents himself

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capacity of their being (actual or potential) parts of an assertible or a statement.

<sup>86</sup> As is clear from this passage, time connotation primarily concerns the connotative ‘be’ implied in the state of affairs which is expressed by the assertible, rather than the assertoric ‘be’ imported by the operator ‘is’.

<sup>87</sup> Of course, the difference is all due to the grammatical difference between name inflexions, which bring about a shift from one object to another (see p. 206 above), and rhema inflexions, which only vary the same attribute’s temporal conditions.

with elliptical remarks. The subject matter is of paramount importance, since it bears on the semantic and syntactical similarities and differences between *onoma* and *rhema*. The section consists of two parts, the first of which (16b19-22) deals with a basic similarity between *onoma* and *rhema*, in spite of the fact that they differ semantically in terms of time reference, as well as syntactically<sup>88</sup> as representing topic and comment, respectively.

*Ibid.*, 16b19-22: When uttered just by themselves the *rhemata* are names and, consequently,<sup>89</sup> significative of something — for the speaker arrests his thinking and the hearer acquiesces [i.e. stops asking]<sup>90</sup> — but they do not yet signify whether or not it is the case.

The two first lines (16b19-20), which deal with the *rhema* when uttered just by itself, are easier to understand than is commonly assumed, as long as they are interpreted along the above lines. The phrase 'when uttered just by itself' is reasonably taken by the commentators to mean 'when taken out of a certain assertoric context'.<sup>91</sup> Perhaps more precisely it concerns the absence of the two features that make up the specific difference between *onoma* and *rhema*, viz. the latter's additional time-reference and its being said of something else, including its attributive use, as e.g. in 'pale man'.<sup>92</sup> On this assumption, the *rhema* is really a mere name, because, just like a name, it only brings up its significate as a semantic value, detached from its being enmattered in something else and, consequently, not including the substratum of which it is said. The fact that the *rhema* in that position does signify something does not yet *eo ipso* imply that the entity involved is, or is not, the case.

<sup>88</sup> By 'syntactically' I am not referring to any predication by means of the 'S is P' construal, but to the syntax of attribution or apposition.

<sup>89</sup> I take καί to be used explicatively.

<sup>90</sup> Boethius IIa, 74<sup>9-33</sup>. Aspasius (c. 125 A.D.) rightly defends this interpretation on the level of naming: when hearing a single word, the hearer's mind is no longer in suspense and, like the speaker, he has a definite entity in mind. This operation has as such nothing to do with framing statements. For the idea cf. *Phys.* VII 3, 247b10-11 ("We are said to know and to understand owing to our thought coming to acquiesce and arriving at a standstill."), and *Problem.* L 14, 956b39-40 ("... sensation and thought function owing to the mind coming to rest; hence 'knowledge' (ἐπιστήμη) seems to be derived from the fact that it makes the mind pause"). For the historical context of the expression see De Rijk (1986), 268, n. 26 and 296, n. 57.

<sup>91</sup> Ackrill, 121; Weidemann, 178; Whitaker, 57f., among others.

<sup>92</sup> Therefore Ackrill's remark (121) that Aristotle "must be using 'name' here in its wide, non-technical sense" is somewhat confusing. In fact Aristotle is using 'name' in a similar restricted technical sense as is found in the label 'indefinite

3. 28 *Is ῥῆμα 'verb'?*

A final remark should be made on the rendering of the technical tool ῥῆμα as it is introduced by Aristotle in the present treatise. The common rendering 'verb' does not adequately reflect the semantic function Aristotle has in mind when he uses the word ῥῆμα, because to him, it stands indiscriminately for any attributive determinant of an entity referred to by a name, no matter if it is nominal<sup>93</sup> or verbal. Therefore the neutral rendering 'attribute' — or in modern technical language 'comment' — when taken to stand indiscriminately for both nominal and verbal determiners, seems to be the most appropriate in English.<sup>94</sup>

To my mind, the function of rhema as the natural complement to onoma should always be taken into consideration. Both ὄνομα and ῥῆμα signify a certain form (εἶδος), which, to Aristotle, can only be in existence when it is enmattered. They are both used to indicate things of the outside world, the onoma by bringing them up qua subsistent entities in their capacity of possessing a subsistent mode of categorial being, the rhema by assigning to them a certain non-subsistent mode of being taken from one of the non-substantial categories. The feature of non-subsistence, which is the characteristic that most clearly marks off ῥῆμα from ὄνομα, comes to the fore both in a semantic and in a syntactic way. The rhema conveys a time reference, which in fact entails that the property it signifies is invested in material, temporal conditions, and it requires that the property in question should be assigned to something else underlying it as its substrate.

In principle, the rhema function can be performed by adjectival nouns as well as verbs and participles, as, from the viewpoint of semantics, the grammatical distinction between nominal and verbal

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name', in which likewise the main technical notion of semanticity is preserved.

<sup>93</sup> Pace Bonitz, *Index*, 666a56-59, H. Steinthal (*Geschichte der Sprachwissenschaft bei den Griechen und Römern mit besonderer Rücksicht auf die Logik* I 1863, 237) is preferring the rendering ῥῆμα in Aristotle 'Prädikat' to 'Verb' or 'Zeitwort'. For Plato see De Rijk (1986), 198f; 224f. Nominal rhemata are found at 16a15; 20a32; 20b2, *pace* Whitaker (148f.). Weidemann is of the opinion (155) that at 16a15 the adjective λευκός is taken as a rhema only because, when combined with the 'copulative' 'is', it may serve as a predicate.

<sup>94</sup> The rendering 'Aussagewort', which some German interpreters rightly prefer to 'Verb' or 'Zeitwort', hits the mark, provided it is not associated (as in Weidemann, *passim*) with the notion 'sentence predicate'. That this association is wrong is clear from 1,16a15, as well as from its function within the λόγος, which has a broader sense than 'sentence'; see my next section.

forms is not momentous, e.g. a person's 'health' = 'his or her being healthy'. What is of importance for the distinction between onoma and rhema is whether the grammatical expression is actually used to stand for subsistent or non-subsistent modes of being, i.e. whether or not it is a substance or substantivated item.<sup>95</sup>

### 3.3 The "curious medley" found in the chapter's final part (16b19-25)

What remains to be discussed are the final sentences of this chapter, which Arens (1984, 50) thought he had good reason to deem "a curious medley, not easily digestible". In these lines, the author tries to corroborate his claim about the rhema — to the extent that, when taken on its own, it is equivalent to a mere name — *inter alia* by an 'anticipatory refutation' (16b22-25)<sup>96</sup> of a possible strong retort concerning the role of the notion 'be'.<sup>97</sup>

Ackrill's interpretation is quite in line with Aristotelian thought: not even the verb 'be' (or 'not be'), which on the face of it seems to really entail 'being-the-case', affords a counter-move to invalidate my claim, Aristotle seems to argue — not even if you use, without any further addition, the term τὸ ὄν ('be-ing'), which *qua substantivated* neuter word ('that which is') does entail the idea of something actually being there. Why not? Because, according to Aristotle (16b23-5), even the verb 'be', including its nominal participle, 'be-ing' "is

<sup>95</sup> Precisely this feature will play a key role in *Int.* 10, 20b1f., where Aristotle claims that irrespective of the word-order, the word that conveys subsistent being should be taken as the onoma, whereas the one signifying a non-subsistent mode of being is the rhema. Incidentally, it is noticeable that the mode of be-ing that is involved in both onoma and rhema is what we have termed earlier (my section 1.64) 'connotative' or 'intentional', which by itself is nothing to do with 'existence' and, as far as rhema is concerned, only implies 'actualization' as opposed to mere potentiality.

<sup>96</sup> I am referring by this term to Aristotle's habit of supporting a claim by invalidating a seemingly strong counter-move. Cf. Ackrill, 114; 123; Ax (1979), 276-9; Weidemann, 156; 163; 181.

<sup>97</sup> Even when taken in isolation, the rhema maintains its being different from the onoma in isolation in that it conveys an entity ('form') as non-subsistent, while an onoma brings it up as subsistent. Cf. Boethius ed. IIa, p. 74<sup>5-9</sup>: "Quemadmodum enim nomen cuiusdam rei significatio propria est per se constantis, ita quoque verbum significatio rei est non per se subsistentis, sed alterius subiecto et quodammodo fundamento nitentis". Notice that here 'subiectum' stands for substratum (ὑποκειμένον), rather than the logical subject of a sentence. In fact, it holds good for the entire "melior expositio" presented at 73<sup>17-74</sup> that the difference between onoma and rhema is explained outside the apophantic context.

nothing" (an empty container, that is), and merely helps to signify<sup>98</sup> a σύνθεσις, which cannot be conceived of without the things combined.

On this interpretation of the text as it stands, some intricate questions still remain, which are raised by Ackrill (122-4) with all due clarity. The chief question is how the lines 16b22-25 support the preceding remark (b19-22). A preliminary point is, Ackrill takes it, to choose at b22 between the readings οὐ ('not') and οὐδέ ('not even'), which both find enough support in our manuscripts, although the latter has more credentials.<sup>99</sup>

On the former reading (οὐ γάρ), the translation will be clear enough: "for 'be' or 'not be' is not a sign of the thing ..."; but how would this corroborate the previous statement? Ackrill (122) puts forward the possibility that Aristotle must have the equivalence of e.g. 'walks' and 'is walking' in mind, and supposes that the author intends to warn us against thinking that the 'is' in 'is walking' is the 'is' which is spoken of at b21-22; which would not be correct, since the 'is' in 'is walking' does not assert the existence of anything; it does not even signify anything in the way 'walking' does (16b23-24: "by itself it is nothing"). Ackrill objects to this surmise that "it uses as a vital step in the argument a point not so much as hinted at here, and not made much of elsewhere" (and not stated until 12, 21b9-10), to wit that 'walks' and the like are equivalent to 'is walking'.

For this reason, Ackrill adopts the other reading (οὐδὲ γάρ), and points out that on this interpretation, the lines b22ff. fail to prove the general point made in the previous lines and rather offer an attempt at an anticipatory refutation of a possible counter-argument against their general point, showing that *not even* the verb 'be' nor, what is even more telling, the phrase τὸ ὄν — both of which, at first glance at least, have the connotation of existence — do assert existence ('something being the case'). On this reading, the line of argument will be: "Maybe what is previously said holds of other verbs, you may say, but what about εἶναι?; what that verb conveys is, surely, precisely ἔστιν (as μὴ εἶναι conveys οὐκ ἔστιν)". "Not even that, Aristotle replies, makes an assertion, saying that something is (the case)". Then, before going on to say what its significance ('co-significance')

<sup>98</sup> For this sense of προσσημαίνειν cf. chapter 10, 20a13. For σύνθεσις see my section 2.3.

<sup>99</sup> It is found in the Ambrosianus (saec. IX) and Marcianus (saec. X) and with Ammonius, whereas Porphyry has the former reading.

actually is, Aristotle throws in a further, still stronger possible counter-move: "If εἶναι does not signify a πρᾶγμα (= 'state of affairs') surely at any rate τὸ ὄν ('that which is') will do!". No, not even that phrase has existential import, Aristotle rejoins. Thus the entire passage (16b22-25) is about εἶναι, the suggested counter-example to the claim made at 16b19-22, while the subordinate point about τὸ ὄν should be read *in parenthesis*.

However, as Ackrill has rightly observed (124), on this interpretation the strongest part of the argument (about the simple 'that-which-is', at b23) has no particular bearing on the verb 'be', since *no* substantival expression<sup>100</sup> on its own states that the something expressed by it is the case. Therefore the claim made at 16b23 is true enough by itself, but its argumentative force as especially bearing on 'be' should be questioned. I will shortly return to this point (my section 3.37).

There is, I take it, another difficulty: what does τοῦ πράγματος at 16b22-23 precisely refer to? What or which is this 'thing'? As is well known, to Aristotle — quite unlike Plato — the notion 'be' is an empty container, i.e. it is devoid of any semantic value or content of its own. If this is what he means to say, you would expect him to write, using the indefinite article: πράγματος τινός or τινὸς πράγματος: "(it is not a sign) of any thing whatsoever".<sup>101</sup> If, on the other hand, Aristotle means a 'thing' expressed by another term, [x], or [y] etc., the claim (" 'be' or 'not be' is not a sign of the 'thing's <actually being there>" )<sup>102</sup> would contradict the previous sentence, where it is implied that the addition of ἔστιν does give the expression existential import.

Weidemann chooses the reading οὐ, and goes quite a different way. He extensively argues (1994, 180-5) for reading at 16b22 τοῦ εἶναι instead of τὸ εἶναι — which requires only the slightest alteration of the text, and seems to be supported by Porphyry's reading of the text — and assumes that the subject is the same as in the previous

<sup>100</sup> Ackrill takes the definite article to be used significantly ('that which is ...'). It can also be understood autonomously ('the word ὄν'), but this does not affect the general purport of the passage, I think. Of course, if you take the phrase τὸ ὄν to mean 'that which is' you have to take the entire phrase autonomously: "the expression 'that which is'".

<sup>101</sup> It would be too bold to read the indefinite του in front of the genitive πράγματος.

<sup>102</sup> Note that you then have to take τοῦ πράγματος elliptically for τοῦ τὸ πρᾶγμα εἶναι, and that '[x]' and '[y]' may stand for a simple or a compound assertible, representing a particular thing or a fact or event, respectively.

sentence. In this way he obtains a fair link with the previous claim (found in 16b19-22), the lines b22-23 coming to mean “for it [i.e. the rhema on its own] is not a sign of the thing’s [viz. the thing signified by the rhema] being or not being the case”.<sup>103</sup>

Weidemann’s reading has the advantage of taking the use of γάρ (‘for’) at 16b22 seriously and presenting a smooth transition, grammatically speaking, from the preceding sentence, in that the subject remains the same, ῥῆμα. However, there are some hurdles ahead. (a) One should be prepared to put up with the somewhat harsh (though not unwarrantable) transition from the plural ῥήματα at b19-22 to the singular forms σημείον (at b22) and αὐτό (at b23); (b) the same holds for the genitive case τοῦ πράγματος (after εἶναι) at 16b22-23, where one would rather expect τὸ πᾶγμα as subject-accusative to the infinitival phrase τοῦ τὸ πᾶγμα εἶναι<sup>104</sup> instead of rendering τοῦ πράγματος a subjective genitive dependent on το(ῦ) εἶναι ἢ μὴ εἶναι. But this difficulty is not insuperable either, because sometimes in similar cases the genitive is found as well;<sup>105</sup> and the unusual construction is probably due to the emphatic position of εἶναι at the head of the sentence (“for of a thing’s being the case, thereof the rhema taken by itself is not a sign”).

A third possible objection to Weidemann’s interpretation concerns the subsequent line (16b23) dealing with ‘being said simply’, which is taken by him in accordance with his interpretation of 16b22-23, meaning “The word ‘be-ing’ when taken by itself, is not such a sign either”.<sup>106</sup> It is raised by Weidemann himself (185): since he takes Aristotle to talk, throughout the entire section, about the finite verb ἐστί (‘is’) — which Weidemann takes (185f.) to be the copulative ‘is’ occurring in any assertion<sup>107</sup> — he is surprised (185) that

<sup>103</sup> “Denn <für> das Sein der (mit ihm gemeinten Sache) oder deren Nichtsein ist es kein Zeichen”. Weidemann rightly follows Porphyry in taking the phrase ‘the rhema by itself’ as the subject of the sentence, supplying it from the previous one; see my section 3.33. — By the ‘thing’ (πᾶγμα) the rhema’s content or semantic value is meant; cf. the later grammarians, e.g. Priscian, calling it the ‘res verbi’. Cf. also van Ophuijsen (1993), 736ff.

<sup>104</sup> Which is the usual construction in Greek; cf. *Cal.* 5, 4b9-10; 12, 14b21.

<sup>105</sup> Kühner-Gerth II-2, 37. See the pertinent comment on Weidemann’s proposal in Gaskin (1997), 49f.

<sup>106</sup> “Auch das Wort ‘seiend’ ist dies nicht, wenn man es für sich allein ausspricht”.

<sup>107</sup> This is the usual view among modern commentators, Ackrill being the only one who explicitly admits of the possibility of an alternative interpretation, by remarking (122) “In fact, however, this ‘is’ merely marks a combination or synthesis, a synthesis which cannot be grasped in thought without the elements synthesized.



Aristotle should use the participle ὄν to stand for it, instead of the finite form ἐστί. But no less surprisingly Weidemann leaves it at that. Indeed Aristotle's use of the participle ὄν instead of the foregoing εἶναι deserves our special attention, I take it, as it appears to have confused the commentators since Antiquity.

### 3. 31 *Some philological problems concerning 16b22-25*

Should the ὄν at 16b23 be taken in the sense of copulative 'is'? This question cannot be settled without considering the position of 16b23 within the section 16b22-25. Three preliminary points should be considered on this score. Firstly, there is the question whether 16b23 should be read *in parenthesi*, as many commentators think it should,<sup>108</sup> the answer, of course, depends on the interpretation of the passage as a whole. Weidemann's opinion (186) that there is no parenthesis at all is tacitly shared by all Ancient and Medieval commentators, who in fact all agree with Weidemann about the equation of ὄν ('being') and ἐστίν (copulative 'is'). The second point again concerns the various manuscript readings (οὐ γάρ vs. οὐδὲ γάρ) at the head of the sentence 16b22-23, and should be further discussed in the context of the third, most important point, which bears on the meaning of the sentence found at 16b22-23. The usual interpretation of this sentence, as we have seen, has been questioned by Weidemann, and rightly so (181-5). When discussing this sentence, he refers to the remarkable way in which Boethius comments upon 16b22-25.

Weidemann (183-5) points out that, in both editions of his commentary, Boethius eventually<sup>109</sup> prefers an interpretation of 16b22-23 along the lines defended by him, and, subsequently, takes Aristotle's

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The 'is' in 'is walking' does not assert the existence of anything". Unfortunately, in the next lines, Ackrill seems to give in to the common propensity to interpret it in terms of 'statement', saying (123) "Whereas in the preceding line [16b22] Aristotle has used 'to be' and 'not to be' to represent 'is' and 'is not', &c., this remark [16b23 is meant, De R.] must be about the actual expression 'that which is'." Compare his 'preliminary remark' (122): "Though Aristotle uses the infinitives 'to be' and 'not to be', these must — if the sentence is to have any relevance to what went before — be taken as stand-ins for indicative forms 'is', 'is not', 'was' &c." As will be argued for presently, the post-Ammonian commentators' putting εἶναι, τὸ ὄν, and ἐστί (? or ἔστι) entirely on a par is at the root of any mistaking of 16b22-25 as a "curious medley".

<sup>108</sup> Unlike e.g. Weidemann, 186.

<sup>109</sup> It is noticeable that in his earlier monographs on logic Boethius hardly seems to adopt the interpretation of 16b22-25 he argues for in the two *Perihermeneias* commentaries. See my section 3.36.

ὅν (at 16b23) to be representative of the copulative ‘est’ (‘is’). Let us have a closer look at Boethius’s comments, not in the least because it suggests that he was still aware of an alternative interpretation.

Unlike Weidemann, Boethius takes — as is commonly done by the later commentators — the phrase τὸ εἶναι (ἢ μὴ εἶναι) as the subject of σημείον. He gives his translation of the passage, interspersing some explanations:

*In Periherm.* IIa, 76<sup>10-15</sup>: Quod autem addidit: ‘neque enim signum est rei esse vel non esse’, tale quiddam est: ‘esse’ (quod verbum est) vel ‘non esse’ (quod infinitum verbum est) non est signum rei, idest nihil per se significat: ‘esse’ enim nisi in aliqua compositione [non] ponitur.<sup>110</sup>

The meaning of what he [Aristotle] adds (“for ‘be’ or ‘not be’ is not a sign of a thing”) is something like this: ‘be’ (which is a verb) or ‘not be’ (which is an infinite verb) is not a sign of a thing, i.e. it does not by itself mean anything; for ‘be’ is only put in some combination.

Some lines further on, however, Boethius goes on to make the foregoing ‘something like this’ more precise by bringing forward an interpretation of what Aristotle means to say by the lines 16b22-23, in which Boethius takes the liberty (most fortunately, indeed) of (literally) changing the subject:

*Ibid.*, 76<sup>19-24</sup>: Neque enim signum est rei esse vel non esse. Etenim quam rem verbum designat, esse eius vel non esse non est signum ipsum verbum quod de illa re dicitur. Ac si diceret: neque enim signum est verbum quod dicitur rei esse vel non esse, hoc est de qua dicitur re.

It [i.e. the verb by itself] is not a sign of a [i.e. its] thing’s being or not being. For as for the thing designated by a verb, the verb that concerns that thing is not by itself a sign of its being or not being. This comes to saying: the verb used is not a sign of a thing’s being or not being, that is to say, the thing it concerns.<sup>111</sup>

<sup>110</sup> I think we should read: ‘esse’ enim <nihil significat> nisi in aliqua compositione [non] ponitur (“‘be’ means nothing, unless it is put in some combination”).

<sup>111</sup> Thomas Aquinas presents (*In Periherm.*, nr. 69) the two interpretations side by side: “Probat autem consequenter per illa verba quae maxime videntur significare veritatem vel falsitatem, scilicet ipsum verbum quod est ‘esse’ et verbum infinitum quod est ‘non esse’; quorum neutrum per se dictum est significativum veritatis vel falsitatis in re; unde multo minus alia. Vel potest intelligi hoc generaliter dici de omnibus verbis. [Cf. Ackrill, 124] Quia enim dixerat quod verbum non significat si *est* res vel non *est*, hoc consequenter manifestat quia nullum verbum est significativum *esse* rei vel *non esse*, idest quod res sit vel non sit. Quamvis enim omne verbum finitum implicet *esse*, quia currere est *currentem esse*, et omne verbum infinitum implicet *non esse*, quia non currere est *non-currentem esse*, tamen nullum verbum significat hoc totum, scilicet *rem esse* vel *non esse*.” In cap. 71 Aquinas follows the second interpretation; see below.

As for the subsequent line (16b23), Boethius not only renders (71<sup>9</sup>) the phrase τὸ ὄν ψιλόν ‘hoc ipsum *est* purum’, but also constantly smuggles his rendering ‘est’ into his subsequent quotations and comments, despite the fact that his Greek sources, including his favourite guide, Ammonius, always faithfully report the participle ὄν. Boethius takes this liberty because in his view (taken over from Ammonius) the participle ‘ens’ (ὄν) is completely equivalent with the finite verb ἐστί.<sup>112</sup> This should arouse our suspicion, all the more so because Boethius does not explain this equivalence at all, and appears to be completely satisfied with Ammonius’s sweeping statement on this account, which is voiced in the rhetorical question (CAG IV-5, p. 574-6) “How else could this sentence [i.e. 16b23] be fitted to prove the preceding one?” Neither Ammonius nor the modern interpreters, who (tacitly or explicitly) join the party have anything more to say on the equation of ὄν with ἐστί.<sup>113</sup> In fact Ammonius has quite a nerve to say (*ibid.*) that by using ὄν, Aristotle *returns* (πάλιν) to the theme ἐστί which was also meant in the previous argument surrounding εἶναι.

### 3. 32 *On the diverse ways of interpreting 16b22-25*

It may be useful now to briefly summarize the different interpretations given by modern scholars of this difficult passage,<sup>114</sup> and, next, pay attention to the ways in which Ammonius, Boethius, and Thomas Aquinas have dealt with it, including the valuable information their discussions contain, explicitly or between the lines, about an alternative interpretation.

Ackrill (123f.) takes 16b22-25 to bear on ‘be’ (in εἶναι and μὴ εἶναι, and in τὸ ὄν as well) as representing the copulative ‘is’ and ‘is not’, but then he does not seem — quite understandably, for that matter — very impressed by the force of Aristotle’s argument as it stands in

<sup>112</sup> “Nec si hoc ipsum ‘est’ purum dixeris, vel si ita dicamus: nec si hoc ipsum ‘ens’ purum dixeris” (77<sup>1-3</sup>); “ipsum ‘ens’, vel ‘est’” (77<sup>8</sup>); “nec si hoc ipsum ‘est’ vel ‘ens’ dixerimus” (78<sup>19-20</sup>). Aquinas, who follows Boethius in taking Aristotle to speak of the copulative ‘est’, is fair enough to remark (*In Periherm.*, nr. 70) that the Greek text reads ‘ens’, not ‘est’: “Ubi notandum est quod in graeco habetur: Neque si ENS ipsum nudum dixeris, ipsum quidem nihil est”.

<sup>113</sup> Ackrill (123) is the only one who has questioned this equation, and rightly so, I think.

<sup>114</sup> Cf. the extensive discussion in Wagner (105-12) of the period from Ammonius to Ackrill. On Boethius’s unfortunate role see De Rijk (2001a), 494f.; 499-506; 513.

the various readings and interpretations. He even suggests (123) that Aristotle may have overlooked the difference between the copulative and existential 'is', since he "often seems to confuse or assimilate the existential and the copulative uses of 'to be'". Eventually, Ackrill does not take a definite stand but confines himself to indicating (123) "the main possibilities of interpretation of this difficult passage".

Returning now to our first question (section 3.31) about the status of the line 16b23 (is it a parenthesis or not?), Ackrill takes (123f.) it to contain a remark *in parenthesi* about the actual expression 'that which is'. To him, "the logical point involved seems to be quite different from the main point of the passage, though naturally connected with it. Roughly: someone might suggest that if 'is' does not make a statement because it does not say *what* is, then surely 'what is' ('that which is') does make a statement — surely 'what is' does say what is". As we saw before (section 3.3), Ackrill recognizes that the reason why Aristotle rejects this suggestion has nothing to do with the verb 'be' in particular, since *no* substantival expression (such as τὸ λευκόν, τὸ βαδίζον) has by itself existential import.

As we have seen, Weidemann (180-7) interprets both the εἶναι of 16b22 and the ὅν of b23 in terms of the copulative 'is', and only wonders (105) why Aristotle should use the participle ὅν instead of the finite form ἐστί. Anyhow, he takes the entire passage in terms of statement-making, so he has no need to take 16b23 as a parenthesis. As far as I can see, most modern commentators understand the section 16b22-25 along similar lines, viz. as rejecting any idea of existential import applying to 'verbs' when taken by themselves.<sup>115</sup>

Turning now to the Ancient and Medieval commentators, let us start with what Boethius, whose own interpretation of our passage has been predominant up to our day, has to tell us about the Greek commentators, Alexander of Aphrodisias, Porphyry,<sup>116</sup> and Ammonius, on account of 16b22-25.

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<sup>115</sup> Whitaker's explanation (55f.) depends on Aristotle's supposed use of the 'copula', but this notion is totally absent in Aristotle. See my section 1.51. Whitaker, too, readily takes (56) the participle ὅν to stand for the finite verb ἐστί in its copulative sense. Even Ackrill, who takes 16b23 *in parenthesi*, and rightly does not straightforwardly take τὸ ὅν in the sense of ἐστί (copulative 'is'), tends to explain (124) the remark at 16b23 in terms of statement-making (with 'existential' 'is'). — I will return to the interpretation of 16b23 in my section 3.37.

<sup>116</sup> Alexander of Aphrodisias had a chair in Peripatetic philosophy in Rome between 198 and 209 A.D. Porphyry flourished in the second half of the third cent. A.D. No doubt, Porphyry, who was also in Rome for some time, was familiar with Alexander's work.

Alexander is said to have explained the 'be' referred to in the line under discussion in terms of the 'be' which is split up into the ten modes of categorial being.<sup>117</sup> Boethius criticizes Alexander's account because he in fact claims (to Boethius's mind, that is) that the notion of 'be-ing' is equivocal, and thus, when used in isolation, it does not unequivocally apply to any mode of being, since it may refer to a non-subsistent mode as well as a subsistent one (substance). To Alexander, unless it applies to this or that thing, it is not significative at all, for the very reason that it has many senses.<sup>118</sup> Alexander could base his interpretation upon the genuinely Aristotelian view that by itself 'be-ing' (ὄν) is an empty notion, which is to be implemented by a categorial determination, to make up some subsistent being or any of the non-subsistent ones (a quale, a quantum etc.). This view of the 'be' involved here comes very close to what we have called 'connotative being' (our section 1.64). Anyhow, in Alexander's interpretation this 'be' has nothing to do with statemental being, nor with truth and falsehood. This will be confirmed by what Ammonius reports about Alexander, as we will see presently.

Next Boethius proceeds to report Porphyry's view of the matter. He tells us that according to Porphyry, the word ὄν<sup>119</sup> does not by itself designate any substance, but is always involved in a combination.

<sup>117</sup> Cf. Aquinas, *In Periherm.* nr. 70, where it is said that to explain the phrases 'by itself' and 'is nothing' Alexander claimed that 'ens' is always used equivocally (apparently meaning 'analogically'). Alexander's view is alluded to and rejected by Ammonius at CAG IV-5, p. 577<sup>8</sup>. In modern times Alexander's view of the categories implementing the empty container 'be-ing' returns with Hermann Bonitz.

<sup>118</sup> Boethius, *ibid.*, 77<sup>3-12</sup>: "[...] Alexander quidem dicit 'est' vel 'ens' aequivocum esse. Omnia enim praedicamenta, quae nullo communi generi subduntur, aequivoca sunt et de omnibus esse praedicantur ['and 'be' is said of all of them']. Substantia *est* enim, et qualitas *est*, et quantitas, et cetera. Ergo nunc hoc dicere videtur: ipsum 'ens', vel 'est' (unde 'esse' traductum est) per se nihil significat. Omne enim aequivocum per se positum nihil designat. Nisi enim ad res quasque pro voluntate significantis aptetur, ipsum per se eo nullorum significativum est quod multa significat". In rejecting (*ibid.*) Alexander's interpretation ("because 'ens' is not said equivocally, but analogically"), Aquinas seems to miss the point, ignoring the fact that Alexander only means to point out the transpredicamental status of the categories ('genera rerum'), since to Aristotle, 'ens' is itself not a genus. Cf. Boethius, *In Isag.* ed. sec. 223<sup>19-24</sup>: "... id quod dicitur ens [...] non dicitur univoco de praedicamentis, idest ut genus, sed aequivoco, idest ut vox plura significans". Notice that Boethius, who, like Alexander, uses 'equivocally' in the sense of 'analogically', is not blamed by Aquinas for using this term.

<sup>119</sup> Of course, Boethius renders it 'est' (sermo hic quod dicimus 'est'), but Aquinas (70) faithfully has 'ens': "Unde Porphyrius aliter exposuit quod hoc ipsum 'ens' non significat naturam alicuius rei, sicut hoc nomen 'homo' vel 'sapiens', et solum designat quandam conjunctionem. Unde subdit [sc. Aristotle, 16b24-25]: "Consignificat quandam compositionem, quam sine compositis non est intelligere".

This composition is then elucidated by Boethius in terms of statement-making.<sup>120</sup> Throughout his comments on this passage, Boethius is devious enough to obstinately replace Porphyry's 'ens' (ὄν) by 'est' (ἐστί). It should be noticed that Thomas Aquinas correctly explains Porphyry's view in terms of appellation, not statement-making; so it is the noun 'ens', not the finite verb 'est', that is said by Aquinas to co-signify the combination.<sup>121</sup>

### 3. 33 *On Boethius's main source, Ammonius*

The main source for Boethius's exposition of our difficult passage was Ammonius (435/45-517/26 A.D.).<sup>122</sup> The latter's account of the matter has been handed down to us in full. It will be useful to examine how Ammonius manipulates Aristotle's text and the comments upon it made by his predecessors, Porphyry and Alexander. What strikes us most is how he bluntly disregards Aristotle's use (at 16b23) of the participle ὄν, as well as the fact that these earlier commentators did respectfully comment upon the text as they had it at their elbow.

<sup>120</sup> *Ibid.*, 77<sup>14-18</sup>: "Sermo hic [...] nullam per se substantiam monstrat, sed semper aliqua coniunctio est: vel earum rerum quae sunt, si simpliciter adponatur, vel alterius secundum participationem"; this is instanced (in the wake of Ammonius; see below) by 'Socrates est' and 'Socrates est philosophus', respectively.

<sup>121</sup> Text quoted in my note 120. Aquinas follows Ammonius in rejecting Porphyry's view (*In Perih.*, nr 70): "Et ideo aliter [i.e. than Porphyry does] exponendum est, sicut Ammonius exponit quod ipsum *ens* nihil est, idest: non significat verum vel falsum. Et rationem huius assignat, cum subdit 'consignificat autem quandam compositionem. [...], scilicet alii adiunctum compositionem significat. Quae non potest intelligi sine extremis compositionis. Sed quia hoc commune est omnibus nominibus et verbis, non videtur haec expositio esse secundum intentionem Aristotelis, qui assumpsit ipsum ens quasi quoddam speciale".

<sup>122</sup> The scholarly controversy whether in general Ammonius was Boethius's main source does not affect the present discussion. L. Tarán (*Anonymous Commentary on Aristotle's De interpretatione* (Codex Parisinus graecus 2064). Meisenheim am Glan 1978), VII f. and n. 10 reviewed Pierre Courcelle's evidence for Boethius's dependence on Ammonius and concluded that there is no reason to think that in his commentaries on *Int.* Boethius is dependent on Ammonius. However, he did not take James Shiel's plausible thesis about the composition of the commentaries on the *Organon* into consideration. According to Shiel, Boethius developed these works by translating the marginal notes he found added to his Greek text of Aristotle, which were taken for the greater part from Porphyry but also from other Greek commentators, among whom Ammonius. For this issue see Shiel (1958), 216-44; De Rijk (1964), 31-37; (1967), 178, n. 1. Otherwise Ebbesen (1990), 375-7, who is certainly right (377, n. 20; 381, n. 30) that Boethius by preference followed Porphyry.

Ammonius starts (CAG IV-5, p. 55<sup>16</sup>-56<sup>13</sup>) with the assumption that the phrases τὸ εἶναι and τὸ μὴ εἶναι are the subjects of 16b22-23, and regards this sentence as presenting an *a fortiori* argument in support of 16b19-22.<sup>123</sup> While the section 16b19-22 generally bears on all kinds of verb, he claims, the *a fortiori* (ἀπὸ τοῦ μᾶλλον) argument concerns the special position of εἶναι (ἐστί), which is said to be the most elementary verb, since it is included in any other verb. In Ammonius's view, then, the next sentence on the participle ὄν (16b22-23) presents yet another *a fortiori* argument. This one is meant to corroborate the first *a fortiori* reason (56<sup>2ff.</sup>), saying that not even that (τοῦτο) participle ὄν — which to Aristotle, Ammonius says, is the very ὄνομα<sup>124</sup> the ἐστί and οὐκ ἐστί are derived from — is “a sign of the thing”, i.e. is indicative of the thing's really being there.<sup>125</sup>

One interesting point emerges in this paragraph: Ammonius correctly takes the infinitives εἶναι and μὴ εἶναι to stand for the assertoric ἔστι and οὐκ ἔστι,<sup>126</sup> but tacitly smuggles (55<sup>21,28,31</sup>) the qualification ‘used by themselves’ into the phrase εἶναι ἢ μὴ εἶναι as used at 16b22, where, unlike in the sentence (16b23) on the participle ὄν, it is conspicuously absent from Aristotle's text. Apparently, this move is meant to prepare his next move of equating τὸ ὄν and ἐστί.

But before addressing the vital sentence about τὸ ὄν, Ammonius pays (56<sup>16</sup>-57<sup>4</sup>) some attention to Porphyry's alternative reading and interpretation of 16b22-23. Reading οὐ instead of οὐδέ, and τοῦ εἶναι instead of τὸ εἶναι,<sup>127</sup> Porphyry turns out to take the phrase τὸ ῥῆμα καθ' αὐτὸ λεγόμενον (to be supplied from the preceding sentence) as the subject of the sentence, and so 16b22-23 presents just a ‘because’, not an *a fortiori* argument: “For the verb, when taken by itself does not signify a thing's being or not being (the case)”. Ammonius's

<sup>123</sup> In his initial interpretation (76<sup>10</sup>-77<sup>1</sup>), Boethius had faithfully followed Ammonius's explanation of the passage.

<sup>124</sup> Note that, unlike ἐστί, the participle ὄν is recognized by Ammonius as being (to Aristotle, at least) an *onoma*. This labelling is repeated at p. 57<sup>25</sup>.

<sup>125</sup> CAG IV-5, p. 56<sup>4-7</sup>: φησὶ γὰρ ὡς οὐδὲ τὸ ὄν τοῦτο, ὄνομα ὄν, καθάπερ οὐδὲ τὸ ἀπ' αὐτοῦ παρηγμένον ῥῆμα τὸ ἔστι, σημεῖόν ἐστι τοῦ πράγματος, τουτέστι [= ‘that is to say’; instead of τοῦτ' ἔστι printed in the edition.]. δηλωτικόν ἐστι τοῦ εἶναι ἀληθῶς τὸ πρᾶγμα, ῥῆθὲν αὐτὸ ψιλόν, ὅπερ ἐστί καθ' ἑαυτὸ λεγόμενον.

<sup>126</sup> CAG IV-5, p. 55<sup>23-24</sup>: πάντων δὲ λαμβάνει τῶν ῥημάτων ἀρχοειδέστατα τὸ ἔστι καὶ τὸ οὐκ ἔστιν, ἅπερ εἶναι καλεῖ καὶ μὴ εἶναι. Of course, the two pairs only differ grammatically, not semantically. Cf. Ackrill's remark on this account (122), referred to above in my note 107. See also Bäck (2000), 61.

<sup>127</sup> Weidemann (182-5) has convincingly argued for adopting this reading in Aristotle's text.

report about Porphyry's interpretation (and reading, we may presume)<sup>128</sup> is clear enough:

Therefore if the text runs in the way we have proposed: "For not even 'to be', or 'not to be', is significative of the things", then you will find that only the aforesaid exegesis gives it its due. But if <it runs> as the philosopher Porphyry reads it: "For it [the rhema] is not a sign of the thing's being or not being", then — although when proceeding he is led to the earlier reading and exegesis — he would seem to claim of all kinds of verbs together that they in the abovementioned way<sup>129</sup> are significative of some things, but not of truth or falsehood; which he [viz. quoting Aristotle at 16b21-22] made clear by the words "However, it does not yet signify whether it is, or is not". Porphyry is presumably presenting the explanation for this by the phrase "For it is not a sign of the thing's being or not being", i.e. "the rhema taken by itself is not significative of the pragma's signified by it being the case or not being the case". (If it had that effect, then it would by its own be susceptible of truth and falsehood). He who merely says 'walks up and down' (περιπατεῖ)<sup>130</sup> indicates a certain activity, but does not say anything true or false about this activity, unless he adds something as its underlying substrate; the fact, then, that this walking falls, or does not fall, to the substrate will produce a true or false statement"; hence the sentence 'It is not a sign of the pragma's being or not being the case' comes down to 'the verb by itself is significative of neither the pragma (i.e. that which is signified by it) being the case — which is usually meant by the affirmation — nor of its not being the case, which is made clear by the denial.<sup>131</sup>

<sup>128</sup> In the critical apparatus, Ammonius's editor, Busse, rightly remarks on the lines p. 56<sup>17,22,29</sup>: "scribas τοῦ εἶναι, quod Porphyrius legisse videtur". I have adopted that reading in the next quotation.

<sup>129</sup> Reading ὥσπερ with the Mss. A and M, and the exemplar used by William of Moerbeke, instead of the reading ὅπερ adopted by Busse. The reference is to *Intl.* 3, 16b19-21.

<sup>130</sup> I.e. 'is teaching' (in the Peripatetic School).

<sup>131</sup> CAG IV-5, p. 56<sup>14-32</sup>: Εἰ μὲν οὖν οὕτως ἔχει τὸ ρητόν ὡς παρεθέμεθα· "οὐδὲ γὰρ τὸ εἶναι σημεῖον ἐστὶ τοῦ πράγματος ἢ μὴ εἶναι", τὴν εἰρημένην ἐξήγησιν μόνην αὐτὸ καθεστῶσαν εὐρήσεις. Εἰ δ' ὥσπερ ὁ φιλόσοφος γράφει Πορφύριος· "οὐ γὰρ τοῦ εἶναι σημεῖον ἐστὶ τοῦ πράγματος ἢ μὴ εἶναι", --- εἰ καὶ προῖων ἐπὶ τὴν προτέραν γραφήν τε καὶ ἐξήγησιν φέρεται --- λέγοι ἂν περὶ πάντων κοινῶς τῶν ρημάτων ὅτι σημαντικὰ μὲν ἐστὶν ὥσπερ εἴρηται τινῶν, ἀλλ' οὐκ ἀληθείας ἢ ψεύδους. "Ὅπερ ἐδήλωσε διὰ τοῦ "ἀλλ' εἰ ἐστὶν ἢ μὴ, οὐπω σημαίνει". Τοῦτου δὲ τὴν αἰτίαν εἴη ἂν ἀποδιδούς διὰ τοῦ "οὐ γὰρ τοῦ εἶναι σημεῖον ἐστὶ τοῦ πράγματος ἢ μὴ εἶναι"· τοῦτο δὲ [δέ Busse] ἐστὶν· οὐ γὰρ ἐστὶ σημαντικὸν τὸ ρῆμα καθ' ἑαυτὸ λεγόμενον τοῦ ὑπάρχειν ἢ μὴ ὑπάρχειν τὸ ὑπ' αὐτοῦ δηλούμενον πρᾶγμα, ὅπερ εἰ ἐποίει, τότε μόνως ἦν ἂν δεκτικὸν ψεύδους καὶ ἀληθείας· ὁ γὰρ εἰπὼν 'περιπατεῖ' ἐσήμηνε μὲν τινα ἐνέργειαν, οὔτε δὲ ἀληθές τι περὶ αὐτῆς εἶπεν οὔτε ψεῦδος, ἐὰν μὴ τι προστεθῇ ὑποκείμενον, ᾧ ἢ ὑπάρχον ἢ μὴ ὑπάρχον τὸ περιπατεῖν ποιήσει λόγον ἀληθῆ ἢ ψευδοῦς. τὸ οὖν "οὐ γὰρ τοῦ εἶναι σημεῖον ἐστὶ τοῦ πράγματος ἢ μὴ εἶναι" ἴσον ἐστὶ τῷ ὅτι τὸ ρῆμα καθ' ἑαυτὸ λεγόμενον οὐκ ἐστὶ σημαντικὸν οὔτε τοῦ εἶναι τὸ πρᾶγμα, τουτέστι τὸ ὑπ' αὐτοῦ σημαίνον, ὅπερ ἢ κατάφασις εἴωθε σημαίνειν, οὔτε τοῦ μὴ εἶναι, ὅπερ δηλοῦται



So Weidemann (182-5) rightly adduces Ammonius's testimony about Porphyry's reading of 16b22-23 in support of his emendation of these lines.

Ammonius's short digression on Porphyry is continued (57<sup>1-6</sup>) with the remark that Porphyry too has to take 16b23 (unlike b22-23, that is) as an *a fortiori* argument in support of the previous thesis that no verb (by itself) is susceptible of truth or falsehood. And he finishes his exposition by rhetorically asking *how* this argument concerning ὄν could be a confirmation of the previous one, unless it is, once again (πάλιν) through the intermediary notion of ἐστί,<sup>132</sup> which, being derived from τὸ ὄν, all verbs have in common. Evidently this exclamation is meant to introduce Ammonius's final move of taking τὸ ὄν as just an equivalent of the finite verb ἐστί.

This move is carried out by Ammonius when commenting (p. 57<sup>6ff.</sup>) upon Aristotle's explanation (16b23-24) "by itself it is nothing". He recognizes that the 'it' is taken to refer to the participle 'be-ing', but immediately goes on to remark that the 'nothing' does not bear on its being 'meaningless' (presumably against Porphyry), nor on its 'being assigned equivocally to the things' (against Alexander),<sup>133</sup> but refers to its 'lacking any truth-value' (57<sup>6-8</sup>).

While still discussing the participle 'be-ing', not the finite verb, Ammonius proceeds to comment upon the concluding lines (16b24-25), saying (57<sup>9-13</sup>) that the term ὄν is part of a composition, such as the (statemental!) one running τὸ ὄν ἐστί ('that which is, exists'), on account of which 'true' and 'false' come into the picture. Once this composition has been understood in terms of statement-making, Ammonius only needs to exploit his earlier identification of the participle ὄν as the *fons et origo* of the finite ἐστί, taking Aristotle himself to be still dealing with ἐστί, designated this time by its 'mother-concept' τὸ ὄν. The composition Aristotle has in mind, then, cannot be conceived of without the things combined, the 'simples' (τῶν ἀπλῶν), that is. On the previous assumption of 'ὄν = ἐστί', Ammonius naturally comes to explain the Aristotelian statement-making utterance in terms of the 'S copula P' construal, and taking the 'simples' to be the two components involved in this composition,

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διὰ τῆς ἀποφάσεως. — For the use of πράγμα in this context see Van Ophuijsen (1993), 752ff.

<sup>132</sup> Moerbeke translates "per hoc quod est medium" instead of "per hoc 'est' medium".

<sup>133</sup> Cf. Aquinas, *op. cit.*, nr. 70; see my note 117.

viz. the subject and predicate terms. However, if he is still reporting the views (and wordings) of the earlier Greek commentators, who did not explain the composition in terms of statement-making,<sup>134</sup> the phrase ‘the simples’ refers instead to the isolated *rhemata* as such, so that the notion of composition bears on the combination of a simple thought with the connotative being it naturally includes.

Subsequently Ammonius explains (57<sup>13-18</sup>) the special sense of ‘co-signify’ as ‘to help signify’, not in the sense in which this verb is used as bearing on the *rhema*’s time-reference discussed above, but meaning ‘signify in addition to the basic semantic value which any “simple” possesses’. Notice that, unlike Boethius, Ammonius keeps referring to the notion ‘be’ by the participle *τὸ ὄν*, not the finite verb *ἐστί*:

Well, what is said is clear. But that the phrase that ‘be-ing’ ‘helps’ to ‘signify’ the combination— and not only that, but equally every combination concerning simple words — does not seem to have been meant in the way the *rhema* was said to co-signify time, but rather of ‘to signify in addition to something else’; that is to say, that in connection with something else (*συμπλεκόμενον*), it signifies a combination — to wit (*ἡγουν*), one susceptible (*δεκτικόν*) of falsehood and truth — of which combination the simples must be previously conceived of.<sup>135</sup>

Let us now consider the casual remarks Ammonius makes about the nature of the combination, as he takes it. It is said or implied that:

(a) ‘To co-signify’ is to be taken to mean ‘to help signify’, not ‘to signify in addition to’, as is the case as far as time-connotation is concerned. Ackrill (123) aptly refers to a similar syncategorematic sense of the phrase at ch. 10, 20a13. Incidentally, this interpretation is (rightly) shared by all Ancient, Medieval and modern commentators.

(b) The participle *ὄν* used by Aristotle — which, it should be recalled, is taken by Ammonius to be equivalent with the finite verb *ἐστί* — co-signifies the combination not only of compound ‘thoughts’, but likewise that of simple words. Putting it another way, the participle applies to both simple and compound assertibles.

<sup>134</sup> See my next section.

<sup>135</sup> CAG IV-5, p. 57<sup>13-18</sup>: *Τὸ μὲν οὖν λεγόμενον δῆλον. τὸ δὲ προσσημαίνειν τὸ ὄν τὴν σύνθεσιν, καὶ οὐ τοῦτο μόνον ἀλλὰ καὶ τῶν ἀπλῶν ἐκάστην ὡσαύτως φωνῶν, οὐκ ἔοικεν εἰρῆσθαι κατὰ τὸν τρόπον καθ’ ὃν ἐλέγεται τὸ ῥῆμα προσσημαίνειν χρόνον, ἀλλ’ ἀντὶ τοῦ πρὸς ἑτέρῳ τινὶ σημαίνειν, τουτέστι συμπλεκόμενον ἑτέρῳ τινὶ σημαίνειν σύνθεσιν δεκτικὴν ἤδη ψεύδους τε καὶ ἀληθείας, ἥς συνθέσεως δεῖ τὰ ἀπλά προεπινοεῖσθαι.*

(c) When linked up with ‘something else’, it signifies a combination whose simple constituents must be previously conceived of. By noting this, Ammonius seems to anticipate his explicit view that a composition of a predicate with a subject term is meant.

(d) This combination is susceptible of truth and falsehood. By these words Ammonius seems to claim that, when it is effectively asserted or denied by someone, the combined expression is either true or false.

It must strike the reader that in one of our manuscripts (Laurentianus 72.7) Ammonius’s explanation that we have to do with a combination effecting a truth-value is introduced by the rather unusual conjunction ἥγουν (‘that is to say’), which is used “to define a word more correctly, frequently in glosses, sometimes introduced into the text”.<sup>136</sup> Therefore the words introduced by ἥγουν may look like an explanation interspersed by Ammonius in what he copied from his source.<sup>137</sup>

### 3. 34 *Ammonius’s debatable appeal to Alexander*

In the remaining part of this section (57<sup>18-33</sup>), Ammonius appeals to Alexander to support his own exegesis of ‘co-signify’, and urges people who have doubts about his own interpretation of ‘co-signify’ (and, more importantly, indeed his interpretation of the element, ‘what co-signifies’, namely, τὸ ὄν in the sense of ἐστί), to listen to Alexander. This appeal is quite confusing and not very convincing, as we will see shortly.

Let us take a closer look at some striking features in Ammonius’s account.<sup>138</sup> Alexander is reported (57<sup>20-22</sup>) to have taken, on behalf of

<sup>136</sup> Liddell & Scott s.v. As this reading is the *lectio difficilior*, it is preferable to the other reading ἤδη.

<sup>137</sup> The insertion may have compelled him to repeat the word συνθέσεως after the relative pronoun ἧς in the next part of the sentence, to prevent the relative from referring to ἀληθείας, which came to precede it because of the explanation inserted by Ammonius.

<sup>138</sup> CAG IV-5, p. 57<sup>18-20</sup>: Εἰ δέ τις μὴ προσίοιτο ταύτην τοῦ προσσημαίνειν ἐξήγησιν. πειθέσθω τῷ Ἀλεξάνδρῳ λέγοντι διὰ τοῦ “αὐτὸ μὲν γὰρ οὐδὲν ἐστί” καὶ τῶν ἐφεξῆς περὶ τοῦ ἐστί διαλέγεσθαι πάλιν τὸν Ἀριστοτέλην μετὰ τὸ εἰπεῖν διὰ μέσου περὶ τοῦ ὄντος ὡς οὐδὲ τούτου ὅταν καθ’ αὐτὸ λέγεται δυναμένου σημαίνειν τι ἀληθὲς ἢ ψεῦδος, καὶ λέγειν ὅτι τοῦτο τὸ ἐστίν --- ἢ καὶ τὸ οὐκ ἐστίν· ὁ αὐτὸς γὰρ περὶ ἐκατέρου λόγος --- αὐτὸ καθ’ αὐτὸ λεγόμενον ἀληθὲς μὲν τι σημαίνειν ἢ ψεῦδος οὐ πέφυκεν, ὄνομα δέ τι ὃν ὥσπερ καὶ τὰ ἄλλα ῥήματα. δύναμιν ἔχει προηγουμένως μὲν σημαντικὴν τῆς τοῦ ὄντος μεθέξεως ἢ στερήσεως, κατὰ δεύτερον δὲ λόγον καὶ κατηγορουμένου τινὸς πρὸς ὑποκείμενον συμπλοκῆς, οἷς προστιθέμενον τέλειόν τε

Aristotle, the remark about τὸ ὄν at 16b23 (that even τὸ ὄν does not signify truth or falsehood) as a parenthetical one-liner, which was only meant to support the general discussion about ἐστίν. In Ammonius's subsequent account (57<sup>23-29</sup>), Alexander comes forward as having said the following about Aristotle's explanation of ἐστίν. When taken in isolation, ἐστίν, and οὐκ ἐστίν as well (because the same account applies to both these expressions), are not capable of signifying something's being true or false. In its capacity of being a sort of onoma,<sup>139</sup> however, just like the other rhemata, it has the force as its main 'purpose' (προηγουμένως) of signifying the participation or privation of being, and also, secondarily, i.e. when there is a categorial implementation (κατηγορουμένου τινός), the force of signifying its connection (συμπλοκή) with a substrate. When added to these two, Ammonius continues, ἐστίν (or οὐκ ἐστίν) makes the λόγος complete and significative of truth or falsehood.

In order to fully evaluate what Ammonius next puts forward, let us first state that in the previous report Ammonius is obviously unable to conceal the fact that, when Alexander comments upon 16b22f., he himself makes no use at all of any contrast between 'isolation' and 'combination' in terms of statement-making in order to explain that isolated words have no existential import. Evidently, Alexander is talking of the implementation of connotative being with a categorial mode of being. Ammonius betrays his interference in Alexander's text, I take it, in a twofold way.<sup>140</sup>

First, at 57<sup>23-24</sup> he apparently smuggles the phrase about 'is not' into his report, where Alexander merely talks about the affirmative

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ποιεῖ τὸν λόγον καὶ σημαντικὸν ἢ ἀληθείας ἢ ψεύδους.

<sup>139</sup> Notice the textual difference from p. 56<sup>5</sup>, where τὸ ὄν was called an onoma, not 'a sort of onoma'.

<sup>140</sup> Compare what Alexander elsewhere says on this account. When (at *APr.* I 1, 24b16) dealing with sentences 'de tertio adjacenti', he points out (CAG II-1, p. 157<sup>-9</sup>) that when attached (προσσιθέμενον) ἔστι signifies the combination of the attribute and the substrate (σύνθεσιν σημαίνει τοῦ κατηγορουμένου καὶ τοῦ ὑποκειμένου), and indicates its affirmation (καταφάσεως δηλωτικόν). In his commentary on *Mel.* (1017a7) he clearly takes (CAG I, p. 371<sup>21-23</sup>) 'be' as an empty container which, when attached to a significative expression, is only co-significative and signifies the same as that which it is added to; for the element 'be-ing' signifies the 'being given' of each: 371<sup>17-24</sup>: εἰπὼν δὲ περὶ τοῦ κατὰ συμβεβηκὸς ὄντος, ἐξῆς περὶ τοῦ καθ' αὐτὸ λέγει. φησὶ δὲ τοσαυταχῶς τὸ καθ' αὐτὸ ὄν λέγεσθαι ὅσα σχήματα καὶ γένη κατηγοριῶν. σχήματα δὲ κατηγοριῶν τὰς δέκα κατηγορίας λέγει· δεκαχῶς οὖν φησὶ τὸ καθ' αὐτὸ ὄν λέγεσθαι. καὶ αἴτιον τούτου ἀποδίδωσιν· ἐπεὶ γὰρ ἐκάστω τῶν ὄντων τὸ εἶναι συντασσόμενον ταῦτόν ᾧ συντάσσεται σημαίνει· τὴν γὰρ οἰκείαν ὑπαρξιν ἐκάστου σημαίνει τὸ ὄν ὁμώνυμον· εἰ δὲ δέκα αἱ κατὰ τὰ ἀνωτάτω γένη διαφοραὶ, δεκαχῶς καὶ τὸ ὄν τε καὶ τὸ εἶναι ῥηθήσεται.

'be', as is plain from the subsequent lines. Another clue to Ammonius bluntly adapting Alexander's views in order to get the man to lay the groundwork for his own interpretation, is found in the muddled way Ammonius (57<sup>24-27</sup>) reports about Alexander's view of the function of an onoma as connoting the participation or privation of being. Whereas Alexander, as far as privation is concerned, has the onomastic level in mind of privative terms (such as 'being a not-man' or 'being not-running'), i.e. their addition to the affirmative 'be', whereby no role is left for the negative 'not be', Ammonius, in his explanation at 57<sup>28-29</sup>, plainly makes Alexander side with his own view that what is intended is not term-infinity, but, on the apophantic level, negative statements ('denials').

This transformation will not come as a surprise, for when he was expounding his own view of the matter earlier (at 55<sup>23-30</sup>), it was already necessary for Ammonius to replace the infinitated terms ('being not-running') with negative predicates ('not-being running').<sup>141</sup> Owing to the fact that he takes the whole procedure on the apophantic level and in terms of statement-making instead of naming (onomastic level), Ammonius's reading τρέχων οὐκ ἔστι ('is-not running') instead of οὐ τρέχων ἔστι ('is not-running') clearly ignores the semantic nature of infinite terms Aristotle and Alexander are here alluding to. As is often the case, Aquinas is more precise on this score, by resolving<sup>142</sup> 'non currere' into 'non currentem esse' (instead of 'currentem non esse'), thus observing the nature of the infinite verb. Notice that it is also Aquinas who correctly explains Porphyry's view in terms of naming, rather than statement-making.<sup>143</sup>

<sup>141</sup> CAG IV-5, p. 55<sup>23-30</sup>: "Of all the rhemata he [sc. Aristotle] takes 'is' and 'is not' as the most basic elements [ἀρχοειδέστατα = 'most of the nature of a principle] — he calls them 'be' and 'not be' (ἄπερ εἶναι καλεῖ καὶ μὴ εἶναι) — because, on his view [ὡς introducing an absolute genitive construction] every rhema is analysed into its participle *plus* one [sc. 'is'] or the other ['is not'], the definite rhemata into 'is', and the infinite ones into 'is not'. For instance, 'runs' into 'is running', and 'thrives' into 'is thriving', while \*'not runs' into 'is not running, and \*'not thrives' into 'is not thriving'. Now, if these rhemata [sc. 'is' and 'is not'], when they are thus taken by themselves, signify no truth or falsity, how could it make any sense then that the rhemata that are posterior to them [i.e. adjectival verbs] and, in short, merely according as they share them are significative of something belonging or not belonging, disclose any truth or falsehood?"

<sup>142</sup> *In Perih.*, nr. 69, where Aquinas tacitly corrects Ammonius.

<sup>143</sup> *Ibid.*, "Quamvis enim omne verbum finitum implicet *esse*, quia currere est currentem esse, et omne verbum infinitum implicet *non esse*, quia non-currere est non currentem esse, tamen nullum verbum significat hoc totum, scilicet *rem esse vel non esse*".

We are now in a better position to appraise Ammonius's further remarks (57<sup>28-29</sup>) about Alexander's views. Ammonius next attributes (57<sup>28-29</sup>) to Alexander the view that "when added to them, the *ἐστίν* makes the *λόγος* complete, i.e. significative of truth or falsehood". But Alexander's putative talk of statement-making does not fit in with the context at all, and this suggests that it was Ammonius himself who concocted the explication found in the final sentence (p. 57<sup>29</sup>).

Another feature of Ammonius's report of Alexander speaking about Aristotle's use of *εἶναι* and *μὴ εἶναι* at 16b22, which has already been given our critical attention, might substantiate our charge against Ammonius as an unfaithful reporter of Alexander's views of the matter under discussion. It concerns Ammonius's muddling up the infinitation of terms and the framing of denials. As we saw just before, Ammonius, and in his wake Boethius and all later commentators, take the negative phrase *μὴ εἶναι* to refer to the negative copula 'is not' (e.g. in '(Socrates) is-not walking'). But we are told by Ammonius himself (57<sup>23-27</sup>) of all people that Alexander explains Aristotle's use of the notion 'not be' in terms of term infinitation, not the production of a negative statement. This is also clear from the fact that Alexander takes the notion 'be' ('not be') as having the significative force of 'sharing' ('being deprived of'), on which interpretation the denial of ambulation of Socrates should be interpreted on the onomastic level as the phrase 'Socrates's not-walking', rather than on the apophantic level as the denial 'Socrates is-not walking'.<sup>144</sup> Now Alexander's unfolding Aristotle's use of *μὴ εἶναι* in terms of infinitation clearly shows that he was taking the notion 'be' to bear on connotative being, included in any appellative name and adjectival verb, whether infinitated or not, definitely not the statement-making assertoric 'is' ('is the case'). The (putative) copulative 'be', on the other hand, is assertoric, to the extent that it produces truth or falsehood. For that reason, there is no way that Alexander could have considered the 'be', in its capacity of onoma,<sup>145</sup> in terms of statement-

<sup>144</sup> Remarkably enough, Ammonius himself (who is followed by Boethius on this score) at first (p. 55<sup>25-26</sup>) associates the negative 'be' with the infinitation of terms. But, afterwards (unlike Aquinas, as we saw before) Ammonius and Boethius apparently (and wrongly, for that matter) take 'is not-walking' to be equivalent to 'is-not walking'.

<sup>145</sup> That *τὸ ὄν* is taken by Aristotle himself as an onoma we learn from Ammonius, CAG IV-5, p. 56<sup>46</sup> himself: *φησὶ γὰρ ὡς οὐδὲ τὸ ὄν τοῦτο, ὄνομα ὄν, καθάπερ οὐδὲ τὸ ἄπ' αὐτοῦ παρηγμένον ῥῆμα τὸ ἐστι... κτλ.*

making and the production of truth and falsehood, as Ammonius and the later commentators think Aristotle did.

As a matter of fact, when we look at Ammonius's desperate search for support in Alexander regarding his own ideas (viz. that Aristotle had statement-making involving truth and falsehood in mind), it appears that Alexander's genuine view must have been clear to him all along. Ammonius time and again cannot avoid betraying his awareness that when commenting upon 16b22-25, Alexander had the non-statemental combination performed by the nominal participle ὄν taken in its capacity of onoma in mind. As we will see, this is precisely what Aquinas too has gathered from Aristotle's words, no doubt inspired, when he read Boethius's comments and Moerbeke's translation of Ammonius, by what he came to know about what the pre-Ammonian commentators, Alexander and Porphyry had said about Aristotle's exposition at 16b22-25.<sup>146</sup>

How then are we to explain Ammonius's final remark (57<sup>29-34</sup>) about utterances such as Σωκράτης ὄν ἐστί ('Socrates ens est') (in which the first thing that requires attention is the word order)? Clearly, he seems to recognize that, apart from the force of the combination conveyed by the assertoric ἔστι in statement-making and the production of truth and falsehood (lines 28-29), there is also a connection between 'be' and a substrate (Socrates), which is effected by the participle ὄν, either together with, or without there being an intermediary categorial implementation. This type of non-statemental combination can only be the one effected by τὸ ὄν in its capacity of conveying connotative being. This urges upon us the surmise that even this part of Ammonius's report of Alexander's views hints at two different kinds of 'combination', one Ammonius's favourite, the apophantic kind, the other merely concerning the conception of either of the component terms making up the assertible

<sup>146</sup> "Si autem aliquis non admittat hanc expositionem eius quod est 'consignificare', credat Alexandro dicenti per hoc 'ipsum quidem enim nihil est' et per sequentia de hoc quod est 'est' [the second 'est' is correctly found in the codex Vaticanus Basilicanus H 6, but omitted by Verbeke, following the other Mss.] disputare Aristotelem, postquam dixit de *ente* quod neque hoc cum per se dicatur, possit significare aliquid verum vel falsum, et dicere quod hoc 'est' vel 'non est' (eadem enim ratio de utroque) ipsum per se dictum verum aliquid significare vel falsum non est natum, nomen autem aliquod existens, sicut alia verba, virtutem habet principaliter quidem significativam participationis entis vel privationis, secundario autem et praedicati alicuius ad subiectum copulationis, quibus appositum et perfectam facit orationem et significativum est veritatis vel falsitatis (pp. 109<sup>21</sup>-110<sup>32</sup>, ed. Verbeke).

involved in any statement. So despite the fact that Ammonius's intention was to interpret the entire passage in terms of statement-making and the production of a truth-value, which made him take the different formulas of 'be' used by Aristotle (ἐστί, εἶναι and ὄν, at 16b21, b22, and b23, respectively) as complete synonyms, which all represent the assertoric 'is' ('is the case'),<sup>147</sup> he was apparently aware of the two different kinds of 'combination'.

Apart from the aforesaid admittedly somewhat speculative surmises, it may be stated with all due certainty that Ammonius takes the liberty of interpreting Aristotle's text rather creatively:

(1) Ammonius takes the terms ἐστί (16b21), εἶναι (b22), and ὄν (b23) to be completely interchangeable.

(2) In light of this identification, he casually assumes not only that the notion 'be' as expressed by εἶναι at 16b22 is taken up by the word ὄν at b23, but also that this ὄν retroactively affects the preceding εἶναι by the qualification 'on its own' (ψιλόν); while, in fact, the notion 'be' as expressed by εἶναι and μὴ εἶναι at 16b22 is definitely not qualified by it.<sup>148</sup>

(3) While Aristotle speaks (16b24) of 'some synthesis' co-signified by the participle ὄν, Ammonius without further ado takes him to speak of ἐστί and, accordingly, to mean the statement-making synthesis mentioned before (16a14-17), which naturally produces a truth-value.

It is appealing to see now that owing to his critical study of previous commentators, Aquinas was fully aware of the alternative interpretation around τὸ ὄν. Apparently this view was held by Alexander and Porphyry, and was recognized by Aquinas (*In Arist. Periherm.*, nr. 71; see below) to come somewhat closer to Aristotle's words.

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<sup>147</sup> In view of this it is tempting, as far as his faithful follower Boethius is concerned, to read 'ens' wherever, in his report (70<sup>18-23</sup>) of Alexander's and Porphyry's views, Boethius has (owing to his usual 'ens = est' trick) 'est': "Nam cum dico 'Socrates *est*', hoc dico: Socrates aliquid eorum est quae sunt et in rebus his quae sunt Socratem iungo. Sin vero dicam 'Socrates philosophus *est*', hoc inquam: Socrates philosophia participat, rursus hic quoque Socratem philosophiamque coniungo".

<sup>148</sup> For Ammonius smuggling the qualification 'by itself' into the phrase εἶναι ἢ μὴ εἶναι see my section 3.33. Note that on either interpretation (i.e. either taking εἶναι as the subject of the sentence, or supplying the subject ῥῆμα καθ' αὐτὸ λεγόμενον from the preceding sentence), the εἶναι and μὴ εἶναι are not qualified by the restrictive determination καθ' αὐτό or ψιλόν.



3. 35 *Some notes on the origin of the copula construal 'S is P'*

As was frequently remarked before, *ad nauseam* indeed, the idea of ἔστί acting as a 'copula' connecting the predicate-term (*P*) to the subject-term (*S*) of a statement of the 'S is P' form is altogether absent in Aristotle (and Plato). As a matter of fact, this idea is still commonly ascribed to Aristotle.<sup>149</sup> However, it is not found until Ammonius, who flourished around 500 A.D., and as a commentator on Aristotle's logical works had a great influence on Boethius (c.480-524), who handed down these works to the Latin world by translating and commenting upon them.<sup>150</sup>

As for Ammonius, in his commentary on *Int.* he claims that in order to frame an apophantic logos, a sort of bond (δεσμοῦ τινός) is required which binds (συνδέοντος) its components together. This task is performed, he says (CAG IV-5, p. 160<sup>13ff.</sup>), by the word ἔστί, which possesses the main force of the sentence. Remarkably, throughout his commentary Ammonius sticks to saying that the ἔστί is 'added' to the components while binding them together; e.g. *ibid.*, p. 165<sup>14</sup> (τὸ ἔστιν [or: ἔστίνῃ] αὐτοῖς προστίθεται συνδέον τε αὐτά). He instances this by ἄνθρωπος δίκαιος ἐστί ('A man is just'), while underlining at the same time that the hypokeimenon, 'man', has the prominent position, because it is 'man' we intend to disclose something about. This much is certain, Ammonius never demands the intermediary position in between the subject and the predicate for the bond, ἔστί.

Ammonius uses the substantive δεσμός to stand for that which performs the act of binding (συνδεῖν), not σύνδεσμος. The latter throughout has the sense of 'conjunction', which is the usual term for conjunction employed by the Greek grammarians from the 4th cent. B.C. onwards.<sup>151</sup>

<sup>149</sup> See, apart from the modern commentators, e.g. W. & M. Kneale, 63.

<sup>150</sup> Bäck (2000, 276) rightly remarks: "Ammonius, although claiming to follow Alexander, is a prime candidate for the copulative theory". In point of fact, Ammonius invented it. Bäck (2000, 271) hazards the reasonable guess that the prevalence of the copula construct over the genuinely Aristotelian view of the statement-making utterance comes in part from the later appropriation of Aristotle's logic by the Neo-Platonists, who might well have found the copulative approach much more congenial to the doctrine of transcendent Forms, because the copula construct, in effect, has a logical structure akin to the lore of participation: the 'subject' partakes of the 'predicate'. (In 1987, 60, n. 60, I wrongly saw in Boethius, *In Periherm.* II 77<sup>13ff.</sup>, a clue to Porphyry as the possible initiator of the copula idea).

<sup>151</sup> Also in Dionysius of Hallicarnassos, *De compositione verborum*, 2, p. 8 R; Id. *De Demosthene*, 48, p. 1101, and Quintilianus, *Institutio oratoria* I 4, 18 R., all quoted in

In Ammonius's commentary on *APr.* there is a reference, I take it,<sup>152</sup> to someone's commentary on *Int.*,<sup>153</sup> in which the author claims that in modal premisses the mode (τρόπος) is not part of the premiss, but rather a means to bind (σύνδεσμος), which has the role of a bolt (γόμφοις), so to speak; for it connects (συνδεῖ) the attribute (predicate) with the substrate (subject). For instance, if I say 'Man of necessity is', then the mode 'of necessity', which is put in between these two terms, connects (συνδεῖ) and composes (συντίθησιν) the word 'is' with the word 'man'. By the way, like other commentators, Ammonius also uses the verb συνδεῖν in the sense of linking up the extremes of a syllogism, as performed by the middle term that the two premisses have in common.

In his commentary on *Int.*, Boethius occasionally uses the verb 'copulare' to indicate the activity of the finite verb 'est', but to my knowledge, he never uses the substantive 'copula' for 'est', either in his commentaries on Aristotle, Porphyry's *Isagoge*, or Cicero's *Topica*, or in his own monographs on logic.

It must strike the reader that in his earlier work, *De syllogismis categoricis*, as well as the *Introductio* to that work, Boethius assigns the verb 'est' the role of indicating the sentence's 'quality', i.e. whether it is affirmative or negative.<sup>154</sup> Not only is there no talk of 'copulare' at all, but, what is more, the author speaks of the verb 'est' as 'accommodated' to the proposition to make up an affirmation. This manner of expression comes very close to considering the verbs 'est' and 'non est' assertoric operators to be *added to* an assertible to make up an affirmative or negative statement.

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Bonitz, *Aristotelis opera* vol. II (*Arist. fragmenta* coll. Valentinus Rose), p. 1499, nr. 126. — Aristotle never uses συνδεῖν or σύνδεσμος in the sense Ammonius does to indicate the combining of an attribute with a substrate; see Bonitz, *Index* s. vv.

<sup>152</sup> There is an omission in the Greek text, some lines before.

<sup>153</sup> No doubt, commenting upon *Int.*, chs. 12 and 13.

<sup>154</sup> *De syll. categ.* I, col. 798A7-10 Migne: "Nam primi termini sunt subiectum et praedicatum. 'Est' enim et 'non est' non magis termini sunt quam affirmationis vel negationis designativa sunt". *Introductio ad syll. categ.*, col. 769A5-14 Migne (corrected after Ms Leiden *B.P.L.* 84 and Paris *B.N. Nouv. acq. lat.* 1611; Valenciennes Bibl. municipale, cod. 406, and Vienna Österreichische Nationalbibl. cod. 2269): "'Est' vero verbum non est terminus, sed designatio qualitatis, et qualis propositio sit negativa an affirmativa significat. Et nunc quidem, solo 'est' verbo propositioni accommodato, facta est affirmatio. At si 'non', quod est adverbium negativum, esset adiunctum, ita diceretur 'Socrates sapiens non est'; atque hoc modo mutata qualitate fieret de affirmatione negatio. 'Est' igitur et 'non est' non sunt termini sed, ut dictum est, significativa qualitatis."

It seems reasonable enough to connect these deviant views of 'est' as found in the monographs (which were written some time before the *Perihermeneias* commentaries)<sup>155</sup> with the author's remarkable shifts in his conception of what Aristotle has in mind in the concluding part of *Int.*, ch. 3. His adherence to Ammonius's view of 'est' as connecting ('copulans') a predicate to a subject is not even foreshadowed in the monographs. Rather it is much more opposite to the expositions in the monographs, which in fact come nearer to the view of 'est' as an operator added from outside to an assertible.

As far as the Medieval period is concerned, the first occurrences of 'est' as a copula I know of date from the end of the 11th and the beginning of the 12th centuries. Garlandus Compotista, who died February 25, 1100 as bishop of Agrigento (Sicily),<sup>156</sup> frequently speaks of 'est' as 'copula'.<sup>157</sup> Peter Abelard (1079-1142) claims that for any proposition to have sense both the correct position of the subject- and predicate-terms as well as the insertion of the copula between these two are indispensable.<sup>158</sup>

Thus with Abelard the process comes to an end: from now onwards, the Ammonio-Boethian 'S is P' construal — in which the copula acts as the binding agent of the statement and, accordingly, is neatly put in between the subject- and predicate-terms — will be the standard. Indeed this model has become such a matter of course that even Aristotle himself is claimed as adhering to it.

<sup>155</sup> The monographs were written about 505-506 and c. 509, whereas *In Periherm.* II dates from about 515-516. See De Rijk (1964), 23-7; 144f. and 159.

<sup>156</sup> Domenico de Gregorio, *San Gerlando*. Vita, scritti, tradizioni popolari. Agrigento 1988, 158-61.

<sup>157</sup> Garlandus Compotista, *Dialectica* III, 78<sup>32</sup>-80<sup>1</sup> ed. De Rijk (Assen 1959); cf. II, 57<sup>31</sup>-59<sup>37</sup>. This work must be dated before 1088, when Garland became bishop of Agrigento.

<sup>158</sup> *Dialectica* II, p. 161<sup>9-14</sup> ed. De Rijk (Assen 1970): "Sunt autem membra ex quibus coniuncte sunt [sc. categorical propositions], predicatum ac subiectum atque ipsorum copula, [...] veluti in ea propositione qua dicitur 'homo est animal', 'animal' predicatur, 'homo' vero subicitur, verbum vero interpositum predicatum subiecto copulat; et in hiis quidem tribus categorice propositionis sensus perficitur"; *Ibid.*, 229<sup>18-19</sup>: "Ad sensum vero uniuscuiusque propositionis et terminorum necessaria est positio et copule interpositio". See also Nuchelmans (1992), 14-6. As a matter of fact, Abelard presents an ingenious attempt to deal with the intricate problem that the verb 'est', which, by its nature as a 'substantive' verb, should involve existential import (its proper 'res verbi', that is), only exerts the function of connecting a predicate with a subject whenever it is used 'de tertio adiacenti', without conveying existential import. *Dial.* I, 136<sup>19</sup>-139<sup>11</sup> ed. De Rijk, put alongside *Log. Ingrid.* 359<sup>9</sup>-363<sup>24</sup> ed. Geyer; De Rijk (1981), 29-40.

Sometimes, however, there is a sparkling of the original idea of an assertible ranged over by the assertoric 'est' as a mere syncategorematic operator. For example, despite the fact that he retains the copula construal, William Ockham (c. 1285-1347) rejects the view that 'est' conveys any real inherence in propositions such as 'homo est albus', because to him, like its 'root' 'esse', the finite verb 'est' is merely a syncategorematic concept. Like other syncategorematic terms such as 'inquantum', 'per se' or 'formaliter', these terms can only co-signify and, just as quantifiers like 'omnis', 'nullus' etc., they are devoid of any 'finita et certa significatio'.<sup>159</sup> The view of 'est' and 'esse' as syncategorematic terms would be more in line with the empty assertoric (hyparctic) operator conception and the idea of connotative being, respectively, than with the patterns implied by the 'S is P' construal.

### 3. 36 *Thomas Aquinas going his own way*

As we have seen, Boethius had no trouble with explaining the section 16b22-25, quite in line with Ammonius, in terms of the finite verb 'est', which is to be taken as *the* constituent of statement-making and the production of truth and falsehood, but is not capable of doing its job when it is taken in isolation from the things combined.<sup>160</sup> It is interesting to see Aquinas's metaphysical approach to the difficult issue of 'be' in his commentary on *Perihermeneias*. Although this commentary most certainly goes back to Boethius as its main source, it none the less testifies to an independent, thorough examination of the matter. Clearly, he is also inspired by the alternative interpretation he came across in the Ancient commentators before Ammonius.

Aquinas begins (*In Perih.*, nr. 70) his exposition of the phrase 'ens by itself is nothing', by rejecting Alexander's interpretation, since he

<sup>159</sup> *In II Sent.* q.1, p. 20<sup>10</sup>-23<sup>5</sup> ed. Gedeon Gál O.F.M. & Rega Wood (Saint Bonaventure N.Y. 1981); cf. his *Summa logicae* I, cap. 4. p. 15<sup>9-17</sup> ed. Brown. See De Rijk (1987a), 322f.

<sup>160</sup> *In Arist. Periherm. IIa*, p. 78<sup>8-13</sup>: "Vel certe ita intelligendum est quod ait 'ipsum quidem nihil est', non quoniam nihil significet, sed quoniam nihil verum vel falsum demonstrat [demonstret *Meiser*], si purum dictum sit. Cum enim coniungitur, tunc fit enuntiatio; simpliciter vero dicto verbo, nulla veri vel falsi significatio fit"; *ibid.*, p. 78<sup>19-26</sup>: "Nec si hoc ipsum est (vel ens) dixerimus, aliquid ex eo verum vel falsum poterit inveniri. Ipsum enim quamquam significet aliquid, nondum tamen verum vel falsum est. Sed in compositione fit enuntiatio et in ea veritas et falsitas nascitur, quam veritatem falsitatemque sine his quae componuntur coniungunturque intellegere impossibile est".

cannot agree with the latter's view of the equivocacy of the notion 'be'.<sup>161</sup> Next Porphyry comes up for discussion. Porphyry's reasonable semantic opposition between words like the substantive noun, 'man' and the adjective, 'wise' as against the word 'ens', which, unlike 'man' and 'wise', only represents an empty notion to be implemented by a categorial determination (such as 'man' or 'wise'), is cast aside in an equally rather arbitrary manner: Aquinas (*ibid.*) is not satisfied by Porphyry's explanation on this account, because it seems to deny any meaning to the notion of 'ens', and so, by considering it neither a noun nor a verb, puts it on a par with such merely syncategorematical concepts as conveyed by prepositions and conjunctions.<sup>162</sup> Finally, Ammonius's view, to the effect that Aristotle's remark 'ens is nothing' should be explained in terms of not having a truth-value, is weighed by Aquinas, and found wanting, since this feature holds good of all nouns and verbs. And if nothing is left of the special function of 'be' as compared to other verbs, which is pivotal for Aristotle's argument, the purport of this argument, Aquinas argues, is obscured.

Eventually, however, in the wake of Ammonius, Aquinas has (tacitly, though) made the shift from 'ens' to the statement-making 'est', so that he in fact comes to share Boethius's opinion that 16b22-25 deals with 'est' in terms of statement-making and the production of truth and falsehood.<sup>163</sup> Thus we see that, like Ammonius and Boethius, in the final analysis Aquinas disposes of the special character of the participial 'be' (ὄν; 'ens'),<sup>164</sup> by replacing it with the

<sup>161</sup> Aquinas failed to see, however, that Alexander only had the transcendence of 'be' in mind, which he was himself equally committed to ('Ens non est genus'; see e.g. *Contra gentiles* I 25, nr. 232; *Expos. in III Met.*, nrs. 432-433. Cf. *In Perih.* nr 92: "Unde Aristoteles noluit quod ens esset genus commune omnium"). As I remarked before, Alexander's 'equivocacy' thesis should be explained in terms of the 'analogia entis', which was so eagerly defended by Aquinas throughout his own works.

<sup>162</sup> The authentically Aristotelian view that the concept, 'be', by itself is merely an empty container will lead someone like Ockham to count the copula 'est' among the syncategorematic terms. Aquinas's rejection of this whole idea is based on his own Platonic conception of 'Esse' as the 'plenitudo formarum'. See Cornelio Fabro, *Participation et causalité selon S. Thomas d'Aquin.* Louvain-Paris 1961, 509-609. As a matter of fact, throughout the Middle Ages both the grammarians (e.g. Peter Helias) and the philosophers and theologians (like Gilbert of Poitiers) had great difficulties getting a grip on the 'substantive verb', and were particularly worried about its 'non-substantive' use as a copula. See e.g. the pertinent discussions in Kneepkens (2000), 239ff.; 255ff.

<sup>163</sup> *In Perih.* nr. 70: "Et ideo aliter exponendum est, sicut Ammonius exponit, quod ipsum ens nihil est, idest non significat verum vel falsum".

<sup>164</sup> As we have noted earlier, Aquinas had before pointed out that Aristotle wrote 'ens', not 'est'.

finite verb (ἐστί; 'est'). However, Aquinas's attitude still differs from Ammonius's (and indeed that of the modern commentators) in that he was fully aware that at 16b23 Aristotle himself wrote the participle of 'be' (ὄν), not the infinitive εἶναι or the finite verb ἐστί. Generally speaking, it is noticeable that Aquinas is still taking what he gathers from (the Latin version of) Aristotle's text as the Stagirite's own opinion about the matter quite seriously, and does not care much for the liberties Ammonius and Boethius took when telling us about Aristotle's real intentions.

When Thomas makes a fresh start to give his own view of the matter, he begins by sticking more closely to Aristotle's text. We should keep well in mind, he says, that earlier Aristotle had claimed that a verb, when taken by itself, does not signify that the 'thing' involved (the so-called 'res verbi') *is* or *is not* (the case). Now this also holds good of 'ens', he remarks, when it is taken by itself. And when he claims that it is nothing, Aristotle means to say: it does not signify that something *is*. This might come as a surprise, Aquinas suggests, for *that* it should signify something really being the case seemed first and foremost to hold of the term<sup>165</sup> 'ens', since 'ens' is nothing but 'what is' ('quod est'). And thus it seems to signify not only a 'thing' owing to the element 'quod', but also its being the case owing to 'est'.<sup>166</sup>

To support the aforesaid suggestion, Aquinas goes on (*ibid.*) to consider the nature of the combination involved. Supposing, he continues, the word 'ens' were to primarily signify 'to be', in the same way in which it signifies the thing that underlies this *esse*, it would, no doubt, signify that the underlying thing *is*. However, the word 'ens' does not primarily signify the composition conveyed by the term 'est', but rather only helps to signify it, inasmuch as it signifies the thing underlying the *esse*. And that is why such a 'co-signification' of the composition is not enough for there to be truth or falsehood. The reason for this is that the composition concerning truth and

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<sup>165</sup> The autonymous use of a word is indicated by Boethius (and the Medievals) by prefixing to it the formula 'id quod dico', 'id quod dicitur', 'id quod est', and the like.

<sup>166</sup> *In Perih.*, nr. 71: "Et ideo, ut magis sequamur verba Aristotelis, considerandum est quod ipse dixerat quod verbum non significat rem *esse* vel *non esse*, sed nec ipsum 'ens' significat rem *esse* vel *non esse*. Et hoc est quod dicit 'nihil est' idest: non significat aliquid *esse*. Etenim hoc maxime videbatur de hoc quod dico 'ens', quia 'ens' nihil est aliud quam 'quod est'. Et sic videtur et rem significare per hoc quod dico 'quod', et *esse* per hoc quod dico 'est'. Cf. Ackrill, 123f. Note that Aquinas takes 'ens' to be used autonymously.

falsehood can only be conceived of in its capacity of connecting the members of the composition.

Subsequently, he proceeds (*ibid.* nr. 72) to found his understanding of the text — which is strongly influenced by his own (Platonic) conception of ESSE — upon the reading ‘nec ipsum esse’ (instead of Aristotle’s ‘nec ipsum ens’), which is the reading he found in the manuscripts at hand (‘libri nostri’). Finally, he finishes the discussion by explaining the property of co-signifying the composition by comparing it with the primary meaning of ‘est’. The verb ‘est’ primarily signifies that which is conceived of under its aspect of simply being actualized, i.e. it indicates some form as being in actuality, which is precisely the way in which verbs perform their significative function. And on this interpretation, the word ‘est’ primarily signifies the actual being of any form, whether subsistent or non-subsistent, and secondarily (‘ex consequenti’) a composition.<sup>167</sup>

In spite of the fact that Thomas’s ultimate interpretation is strongly influenced by his own metaphysical position, in which the doctrine of the ‘actualitas formarum’ is a predominant issue, his speculations on the proper sense of ‘be’ remain worth considering, especially because of the fact that, as a whole, his extensive expositions (nrs. 69-73) fail to express a consistent line of thought in the treatment he, as a commentator on Aristotle, presents on the matter. And this lack of consistency might be seen as another clue to the existence of an unfortunate mix-up of interpretive levels (one onomastic, the other apophantic) in Ammonius’s discussion, who liked to support his own peculiar view of Aristotelian statement-making by adapting the views of his predecessors, Alexander and Porphyry. But, and this is more important, what Ammonius and Boethius in fact tell us about the commentary tradition before Ammonius, cannot conceal the existence of an alternative, older interpretation of 16b22-25. Of all the later commentators Aquinas proved to be most sensitive to it.

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<sup>167</sup> *Ibid.*, 73: “Ideo autem dicit quod hoc verbum ‘est’ consignificat compositionem quia non eam principaliter significat, sed ex consequenti. Significat enim primo illud quod cadit in intellectu per modum actualitatis absolute. Nam ‘est’ simpliciter dictum significat in actu esse; et ideo significat per modum verbi. Quia vero actualitas, quam principaliter significat hoc verbum ‘est’, est communiter actualitas omnis formae, vel actus substantialis, vel accidentalis, inde est quod cum volumus significare quamcumque formam vel actum actualiter inesse alicui subiecto, significamus illud per hoc verbum ‘est’ [...]. Et ideo ex consequenti hoc verbum ‘est’ significat compositionem”.

3. 37 *Consuming now the 'indigestible' portion*

Overviewing the multifarious comments of the Ancient and Medieval commentators on account of the *pièce de résistance* of the difficult section, 16b22-25,<sup>168</sup> one is bound to become confused. Indeed, one is perhaps inclined to evaluate these other commentators in much the same way as Boethius judged Porphyry with the remark that instead of elucidating Aristotle's text, the commentator managed to obscure it.<sup>169</sup>

Let us try to make the best of it, all the same. This much seems to be certain:

(a) In the entire commentary tradition from Ammonius onwards, the purport of the lines 16b22-25 is unduly narrowed in terms of statement-making to an exposition about the finite verb 'is' (both 'copulative' and 'existential'), instead of interpreting this passage in the broader context of Aristotle's treatment (16b19ff.) of the meaning of isolated (onomata and) rhemata.

(b) In the commentary tradition after Ammonius, the interpretation of ὅν (at 16b23) as a mere equivalent of ἐστί (the 'copula' ἐστί, of course) is pivotal to the debatable idea that 16b22-25 should be understood entirely in terms of statement-making and the issue of truth-values.

(c) The lines 16b22-25 do not afford any clue to the idea that 'what is combined' (16b25: τῶν συγκειμένων) is combined by ἐστί acting as a 'copula'. The participle συγκείμενα instead refers to things which are combined with 'be' — the 'be', that is, which is itself *added* to them.<sup>170</sup>

All in all it does not seem unreasonable to assume that the reason why to this day the passage 16b22-25 is deemed 'not easily digestible' has to do with two developments in the commentary tradition:

(a) The entire commentary tradition (at least from Ammonius and Boethius onwards) has failed to take the lines 16b22-25 as just a development of the proper theme of 16b19ff., to wit, the use of *isolated* expressions (whether rhemata or onomata) not having existential

<sup>168</sup> Weidemann (1994, 183) aptly refers to Peter Abelard and Albert the Great alongside Thomas Aquinas.

<sup>169</sup> *Ibid.*, 71<sup>13-18</sup>: "Hoc loco [16b19-25] Porphyrius de Stoicorum dialectica aliarumque scholarum multa permiscet, et in aliis quoque huius libri partibus idem in expositionibus fecit quod interdum nobis est neglegendum. Saepe enim superflua explanatione magis obscuritas comparatur".

<sup>170</sup> My section 2.15.



import. This caused the commentators to ignore the fact that to Aristotle, the grammatical difference between *isolated* onomata and *isolated* rhemata is of no semantic significance (16b19-21).<sup>171</sup>

(b) In the post-Ammonian commentary tradition — save some incidental remarks by Thomas Aquinas — the participle ὄν used by Aristotle at 16b23 is either tacitly or categorically taken to be representative of the finite verb ἐστί. The putative equivalence is never argued for satisfactorily, let alone paying attention to the reason why Aristotle should use the different label τὸ ὄν.

We can try now to make a fresh start, by first of all taking Aristotle's option (at 16b23) for the participle ὄν quite seriously, and continually keeping the general theme of 16b19ff. concerning the use of *isolated* rhemata and onomata in mind.

Along this line of approach it might be suggested that when attempting to present a clear and consistent interpretation of our passage (16b22-25), we should start from the following assumption. In order to rule out any idea of existential import, as far as rhemata (and onomata as well) when taken by themselves are concerned, Aristotle first (16b22-23) explains why a rhema on its own is not significative of the 'thing' signified by it as being in existence; then, in the manner of an anticipative refutation, he sets out to nullify the (seemingly) somewhat stronger claim on existential import the notion 'be' may have as conveyed by the participial phrase τὸ ὄν, which, incidentally, Aristotle regarded as an onoma.

Thus the entire passage 16b19-25 is to be taken as dealing with our use of isolated expressions signifying 'thoughts in the soul having no truth-value'. Quite in line with what we are told in the opening chapter (16a9-18), Aristotle now argues that such isolated expressions (whether onoma or rhema) do not imply that their πρᾶγμα or semantic content (say e.g. that conveyed by the onoma 'health' or the rhema 'healthy' or 'thrive') is satisfied by an outside instance possessing the form 'health' (= 'being healthy'). This is precisely the purport of 16b19-22. In this passage the focus is on the use of the isolated rhema, and this focus remains in the subsequent explanatory sentence (16b22-23), on the reading argued for by Weidemann and supported by Porphyry: "For <the rhema taken by itself> is not a sign

<sup>171</sup> There is a lot of truth in De Haas's remark (forthcoming, p. 2) that it is safest not to read the commentators as partners in our project of understanding Aristotle, but as philosophers who are trying to make their own points through the traditional medium of a commentary on a more or less congenial text.

of its ‘thing’s [= semantic content’s] being the case or not being the case”.

Coming now to the line 16b23 on τὸ ὄν, this phrase can be taken either significatively (meaning ‘that which is’) or autonomously (for the word ‘be-ing’). Let us begin by taking it to stand for ‘that which is’. Then Aristotle means to say that even if you simply utter <the expression><sup>172</sup> ‘that which is’ there is still no question of existential import. This is true enough, but does not particularly hold of the substantival expression τὸ ὄν, but of, say, τὸ λευκόν or τὸ βαδίζον as well. Therefore in order to explain how Aristotle’s argument makes a strong case for the peculiar position of ‘be’, it seems reasonable to look for a telling difference between ‘be’ and terms such as ‘white’ and ‘walk’. To Aristotle, I take it, there *is* an important one: although, of course, e.g. ‘that which is walking’ (τὸ βαδίζον) is devoid of any existential import unlike the phrase τὸ ὄν, it *is* significative by itself, i.e. it has a semantic content of its own. In this context, Aristotle’s use of ψιλόν (‘simply’) is important. This word is often used to indicate the absence of all kinds of (extrinsic) ‘appendages’ (‘stripped of hair or feathers’, ‘naked’, ‘bare’, ‘without heavy armour’ etc.); but it can be used — intrinsically, so to speak — for the absence of any content. It is used in this sense quite significantly by Plato, e.g. *Theaet.* 165A2, where mere forms of argumentation, unimplemented dialectical schemes, are called ψιλοὶ λόγοι, and opposed to such schemes as applied to geometry.<sup>173</sup> Thus *pace* Bonitz (*Index*, p. 862b35) ψιλόν is not entirely the same as the previous καθ’ αὐτό. In other words, τὸ ὄν taken simply is not this phrase without any ἔστιν added, but rather what we have earlier termed ‘connotative being’, which lacks any notional implementation, as opposed to ὢν ἄνθρωπος (‘being a man’).<sup>174</sup>

On this interpretation, Aristotle is continuing his previous claim that ‘be’ is a (categorially) empty container, even in its occurrence as a substantivated participle. Indeed, none of its grammatical forms include a πρᾶγμα; nor could it express the idea that some πρᾶγμα is

<sup>172</sup> See my note 100.

<sup>173</sup> A similar use occurs at *Statesman* 258D5, where Young Socrates is asked if arithmetic and certain other arts (τέχναι) closely akin to it do not miss any bearing on practical activity (ψιλαὶ τῶν πράξεων εἰσι), yielding us insight only. At *Phaedrus* 262C8 the adverb ψιλῶς is used in a like manner: “At present our discussion is somewhat abstract (ψιλῶς πως λέγομεν), for want of <an implementation by> adequate examples”.

<sup>174</sup> My section 1.64.

really the case. Clearly, when you consider the phrase τὸ ὄν in this way, the grammatical difference between the renderings ‘that which is’ and ‘the expression “be-ing”’ no longer matters, since the issue is all about the notional emptiness of ‘be’.<sup>175</sup> The question of whether 16b23 should be read *in parenthesi* is no longer of consequence either: what is claimed in the next lines (16b23-25) holds good of εἶναι in each of its appearances, because ‘be’ — including both ‘is’ (i.e. the strong hyparctic or assertoric ἔστιν), and ‘be-ing’ (the connotative or weak hyparctic ὄν) — is merely a co-significative element of a composite expression, and cannot be thought of without that with which it is combined.

In point of fact, that which ‘be’ is combined with is of a threefold nature:

(a) it is a mere implementation of connotative ‘be’, such as ἄνθρωπος in ὢν ἄνθρωπος and τὸ ἀνθρώπῳ εἶναι; likewise βαδίζων is analysed as βαδίζων ἔστιν.<sup>176</sup>

(b) it is the implementation of assertoric ‘is’ (ἔστιν):

(b<sub>1</sub>) the implementation being a single assertible, e.g. in ‘Is: [man’s be-ing]’

(b<sub>2</sub>) the implementation being a compound assertible, e.g. in ‘Is: [(man&just)’s be-ing]’.

Thus the objection suggested by Aristotle again concerns an isolated expression, this time an onoma, viz. τὸ ὄν, which, when taken on its own, is to be treated on the same footing as the isolated rhema, in accordance with what is implied at 16b19-20. Aristotle claims, if you use the nominal participle ὄν without appending something else (16b23: ‘simply’), our general rule on isolated terms not including any truth-value is still valid, despite the fact that it includes, on the face of it at least, a reference to the outside world. However, even in its participial form ‘be’ does not have existential import either (οὐδέ), because taken by itself, ‘be’ has no semantic value, and only serves to make the combination it is added to significative; its only function is to provide assistance, semantically, for without the things it is combined with it cannot even be thought of (16b23-25).

It is pivotal to the interpretation of 16b19-25 to recognize that, from 16b23 onwards, Aristotle in fact restricts his attention to an

<sup>175</sup> Compare the Ancient commentators (and Aquinas as well), who all indiscriminately take this phrase either way. For the general background of this procedure see our semantic Main Rules RMA and RSC; my section 1.71.

<sup>176</sup> My section 1.64.

isolated onoma. You may now raise two sub-questions: (a) whether Aristotle really takes τὸ ὄν to be an onoma, not a rhema; and (b) why, by the advancing of all nominal expressions of τὸ ὄν in particular, Aristotle can be thought to be making a strong case for his supposed opponent. It is Ammonius of all people who replies to our two questions by paraphrasing 16b23ff. thus:<sup>177</sup> Aristotle proves his thesis about the isolated rhemata lacking existential import by using an *a fortiori* argument; for he claims that the onoma (*sid!*) ὄν, when taken in isolation, is not significative of any pragma really being the case either.

This argument is accorded the force of an *a fortiori* argument by most other commentators, among whom Boethius and Aquinas *ad loc.* The remark that what is said here of ὄν — however true — in point of fact applies to any adjectival verb as well, is beside the point, if it is meant to take exception to the force of the argument. For the special force of the argument of 16b22-25 is the following. Although the basic notion of ‘be’ as conveyed by the onoma (τὸ) ὄν might at first glance really seem to include existential import on its own (16b21-23), because it seems to include the ἔστι required for providing the expression with existential import, it actually does not, since the notion ‘be’ conveyed by it is definitely not that of *the* bearer of existential import, assertoric ἔστι.<sup>178</sup> Now once this first impression has proved to be a mistake, the strongest reason for supporting the opposite of Aristotle’s thesis drops out, and *eo ipso* Aristotle’s point of view becomes more plausible.

Another point I would like to make concerns the ‘sort of’ synthesis mentioned at 16b24. On my interpretation, the word σύνθεσις means the composition of any semantic value whatsoever with the empty (i.e. merely co-significative) container ‘be-ing’ so as to form a significative notion, such as ‘being-a-man’, ‘being-healthy’. Although it might seem odd that there is only talk of σύνθεσις, not of its usual counterpart διαίρεσις, this is in fact quite understandable. For even

<sup>177</sup> CAG IV-5, p. 56<sup>4-7</sup>: κατασκευάζει δὲ καὶ τοῦτο τὸν ὅμοιον τρόπον ἀπὸ τοῦ μᾶλλον λάβων τι τοῦ ἔστιν ἀρχοειδέστερον τὸ ὄν, ἀφ’ οὗ παρήχθη τὸ ἔστι καὶ τὸ οὐκ ἔστι· φησὶ γὰρ ὡς οὐδὲ τὸ ὄν τοῦτο, ὄνομα ὄν, καθάπερ οὐδὲ τὸ ἀπ’ αὐτοῦ παρηγμένον ῥῆμα τὸ ἔστι, σημεῖόν ἐστι τοῦ πράγματος, τουτέστι δηλωτικόν ἐστι τοῦ εἶναι ἀληθῶς τὸ πρᾶγμα, ῥηθὲν αὐτὸ ψιλόν, ὅπερ ἐστι καθ’ ἑαυτὸ λεγόμενον. For the incorrectness of the concluding remark see above.

<sup>178</sup> It should not escape our attention that this argument parallels the one about ‘goat-stag’ at 1, 16a16-17, where a notion is brought up that, on the face of it, seems to include its non-existence, in a similar way as ὄν seems to include existence.

the use of an indefinite onoma ('not-man') or rhema ('not-just', \*'not-thrives') invokes a composition in its calling up something as 'being a not-man', and so on. That Aristotle should indicate this peculiar synthesis<sup>179</sup> as 'a sort of synthesis' (σύνθεσίν τινα) is, I take it, significant in that it is thus marked off from the usual synthesis that has diairesis as its counterpart, both of which concern the framing of assertibles.

Thus it turns out that the entire passage deals with isolated expressions (rhemata and onomata alike) lacking existential import, period. And under what conditions they acquire existential import (viz. when combined with the finite assertoric verb ἔστι, as we were taught at 1, 16a17-18) is not yet at issue in chapter 3. Even if Aristotle were to know of a 'copula' ἐστί (and this with the force of an assertoric operator) at all, this idea would still be unaccounted for in chapter 3. All this suggests that we should take the ὅν at 16b23 to stand for what I have baptized earlier 'connotative or intensional being', which is included in any occurrence of an onoma or rhema.<sup>180</sup> In fact, this connotative 'be' is nothing but a binding agent which has no (categorical) semantic value of its own — in Aristotle's words, 'it is nothing', and only co-signifies 'a sort of' combination', viz. the combination that is involved in any occurrence of a nominal or quasi-nominal semantic value: this is because to Aristotle, it by definition includes connotative 'be-ing'. In light of the anatomy of the Aristotelian statement argued for in the present study, this connotative 'be' (conveyed by any definite or infinitated onoma or rhema)<sup>181</sup> does not represent the assertoric operator ἔστι, but is part of the operandum (viz. the assertible) which is ranged over by this operator in any fully-fledged assertion.

All things considered, it is only the commentary tradition from Ammonius and Boethius onwards which has turned 16b19-25 into a "curious medley". Approaching it freshly, the concluding part of chapter 3 may now be rendered as follows:

<sup>179</sup> See my section 2.32.

<sup>180</sup> My section 1.64. In his report on Porphyry's view of the matter (*In Perih.*, nr. 70; for the text see my note 121), Aquinas, between the lines, seems to let us know that Porphyry opposed the empty notion 'ens' to the semantic values 'homo' and 'sapiens', where 'sapiens' apparently instances the rhema expressive of the actualized form 'enmattered wisdom'. Along this line of thinking, verbal forms, such as 'thrives', when taken on their own, are in fact equivalent to actualized forms expressed by onomata. This is precisely the idea behind the whole section 16b19-25.

<sup>181</sup> See Ammonius CAG IV-5, p. 55<sup>26-28</sup>; Boethius II, 76<sup>10-13</sup>; Thomas Aquinas, nr. 69.

*Int.* 3, 16b22-25: For it [i.e. the verb taken by itself] is not a sign of the thing's [i.e. the semantic value signified by it] being (the case), or not being (the case). The word 'be-ing', if it is used barely, is not such a sign either. For by itself it is nothing, but it helps signify some sort of composition, which cannot be thought of without what is composed.

### 3. 4 *On statement-making*

It can hardly be overstressed that it is not until now that the central theme of the treatise — statement-making — comes up for discussion. First (in chapter 4), in contra-distinction to its component parts, onoma and rhema, the compound expression, λόγος is defined, and then opposed to statement (assertion, λόγος ἀποφαντικός). In the subsequent chapters 5 and 6, affirmation and negation (including denial) will be dealt with.

#### 3. 41 *The semantics of λόγος (both 'assertible' and 'assertion')*

Chapter 4 opens with the definition of λόγος, the definiens of which has been arranged in a similar way to that of onoma:

*Int.* 4, 16b26-33: A logos ['phrase' or 'account'] is a significant articulate sound some part of which is significant in separation, as an expression, not as an affirmation. I mean that 'animal', for instance,<sup>182</sup> signifies something, not, however, that it is or is not, though there will indeed be an affirmation or negation if something is added. But this does not hold of the single syllables of 'animal'. Nor is the 'ice' in 'mice' significant; here it is simply a spoken utterance. In double words, as we said, a part does signify, but not in its own right.

This distinctive feature 'some part of which ... etc.', that aims to highlight the main difference between logos and its constitutive parts, onoma and rhema, is explained by Aristotle in the next lines by counter-instancing the case of names, whose parts, unlike those of a logos, are not significative. The opposition to names is clarified by pointing out, quite in line with what has been said at 16b19-22, that, for instance, the name 'man' taken as part of a logos, does signify something. But to prevent any misunderstanding on account of its being significative, Aristotle recalls what he has tried to make clear in the previous discussions, viz. that its meaning does not convey any existential import, since the name is only significative in its capacity

<sup>182</sup> Following Ackrill, I have changed Aristotle's example (ἄνθρωπος), since its English equivalent is monosyllabic.

of expressing something ('semantic value'), not in the manner of a statement-making affirmation; hence the question of its 'thing' being the case is left undecided. The last observation is then qualified by reminding us that when "something" (viz. 'is' or 'is not', or an adjectival verb analysable into its participle and 'is' or 'is not') is added, a genuine affirmation or negation is made up. By way of counterposition the opposite condition of a name's parts is instanced. So far, Aristotle only repeats what he has made clear earlier.

Next the non-statement-making significant expressions, such as prayers, threats and commands,<sup>183</sup> are ruled out, because they all lack truth-value. Thus it is the statement-making expression (λόγος ἀποφαντικός) that will be the subject-matter of the present investigation (16b33-17a7).

As for its basic ingredient, the Greek word λόγος — which is the verbal noun deriving from a root that, roughly speaking, always connotes an orderly procedure, a discernment, or the speaker's intention to 'clear up' some situation — has several meanings.<sup>184</sup> One of its primary meanings is 'account', which includes 'speech' (as a means of 'giving an account' or 'accounting for'), as well as the more sophisticated 'argument'.

It should be kept in mind, however, that λόγος does not as such stand for 'statement'; it may also refer to phrases, such as 'beautiful horse' (16a22) or a definiens, such as 'two-footed land animal' (17a13). As has been argued for above (sections 2.14-2.15), the anatomy of the Aristotelian statement-making utterance is such that it contains the assertoric operator 'is' or 'is not', which is added to an assertible, which may be a simple onoma or an expression composed of a name (onoma) and an attribute (rhema) together making up a logos in its capacity of 'assertible'. Owing to the addition of the assertoric operator 'is' or 'is not' the assertible becomes a statement-making expression (λόγος ἀποφαντικός). It is extremely important to distinguish between these two senses of λόγος,<sup>185</sup> the more so as

<sup>183</sup> Cf. *Poet.* 19, 1456b10-11. Note that they all use one and the same dictum, or rather 'dicibile' (which in the case of assertions is called 'assertible'); my section 2.14. Owing to the addition of the 'utinam' operator, the expression containing the dicibile turns into a wish or prayer, just as other operators cause the same dicibile to be part of a command etc.

<sup>184</sup> For a survey of its various senses see Ackrill, 124; De Rijk (1986), 194-6, 225-34; (1987), 39f.; Montanari (1988) II, 293-9; Weidemann, 188f.; and my section 2.21.

<sup>185</sup> I have distinguished these two before as λόγος<sub>1</sub> and λόγος<sub>2</sub>; De Rijk (1987), 40-4; my present section 2.21. In Rehn (2000, 152ff. and *passim*) the usual

Aristotle's semantics occasionally uses λόγος as a *nomen commune* to stand for λόγος ἀποφαντικός.

### 3. 42 *On affirmation, negation, and contradiction*

Chapter five is concerned with the primitive (πρῶτος) single (εἷς) statement-making utterance, dividing into affirmation and negation. This utterance is opposed to the non-primitive, which is only single in virtue of a connective (συνδέσμῳ εἷς) and is formed by linking some assertions together.

Any single statement-making expression must contain the assertoric operator added to an assertible. The logos that is merely a composite account of something is not yet a statement-making expression (λόγος ἀποφαντικός), unless 'is' or 'will be' or 'was' or something of the kind is added (17a9-12).

Two remarks are made on the issue of oneness. First, an incidental reference is made (17a13-15) to *Met.* (Z 12, H 6, and I 9, globally designated here as "a different inquiry") where the unity of a special account, viz. the definiens is discussed.<sup>186</sup> Then the question what constitutes a single statement-making expression is given a first answer: it is either one if it reveals a single thing, or if <it does not but> is made single in virtue of a connective; they are more than one if they reveal more things than one, or are just unconnected (17a15-17). This issue will be taken up in chs. 8 and 11.

Next follows a parenthetical remark on the opposite items, onoma and rhema: "Let us reserve the words 'name' and '(verbal or nominal) attribute' to what simply is nothing but an expression (φάσις), because by using it one cannot reveal anything by one's utterance<sup>187</sup> in such a way as to give one's opinion ('enunciate', ἀποφαίνεσθαι), whether one is answering a question or speaking spontaneously" (17a17-20).

The chapter winds up with assessing and defining two sorts of enunciation (ἀπόφανσις), viz. a simple one, affirming or denying something of something, the other a compound one, which is composed of simple ones. The former is defined as a significant spoken

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confusion between these two senses is found, which leads him to think (176, n. 38) that Aristotle at *Int.* 4, 16b26 rates 'statements' (fully-fledged 'assertions', instead of 'assertibles') among the φωναί.

<sup>186</sup> My sections 9.33; 9.52; 9.6; cf. 6.55-6.58.

<sup>187</sup> In this context, Aristotle may have alluded to different other means, such as facial expression.



utterance about whether something is, or is not, the case, in accordance with time-reference. An affirmation is an enunciation affirming something about something, while a negation is one that denies something about something (5, 17a20 to 6, 17a26).<sup>188</sup>

Whitaker (75-7) has well observed that at 17a15-24 Aristotle is applying two different criteria for what makes an assertion single. The first is to do with whether the assertion expresses a single claim about a single object; it may be called the semantic criterion. The other is rather syntactical, as Whitaker aptly labels it, and bears on two (or more) assertions being, or not being, connected by a conjunction, as a result of which they are counted either one or more than one, respectively. Thus if two assertions — the same holds for phrases or non-apophantic expressions, as we will see presently — are linked by 'and', they will still be counted as more than one on the semantic criterion when two distinct claims are made, despite their being one on the syntactical criterion. Whitaker is quite right in underlining (76) that the discussion in chapter 8 makes it clear that it is the semantic criterion which is of the greater importance.

Some more comments are called for. First, what Aristotle presents here about different ways of statement-making is not meant as a complete exposition of the matter, covering each and every manner in which we can communicate with one another.<sup>189</sup> Rather, the chief vehicles which are in use in dialectical disputes or to seriously discuss philosophic issues,<sup>190</sup> will be taken into consideration.

Ackrill (127) accuses Aristotle of not telling us how to decide whether a given simple statement is an affirmation or a negation, and supposes Aristotle to rely on the presence or absence of a suitably-placed negative particle 'not'. On this assumption, the decision should boil down to determining whether the thought conveyed by the expression represents the things as connected or disconnected, in accordance with what has been stated in chapter 1 of the present treatise. However, Ackrill objects, Aristotle fails to make clear how

<sup>188</sup> Cf. Plato, *Sophist* 263A11-D5; De Rijk (1986), 206-9.

<sup>189</sup> Cf. Ackrill's critical observations (127f.).

<sup>190</sup> Whitaker (1f.) wrongly restricts the purport of *Int.* to the working of dialectic, and in particular to what is under consideration in such dialectical works as the *Top.* and *SE.* This criticism does not affect his correct approach to Aristotle's present treatise by examining it as a whole and even a coherent unity, so that even the sections that are so often considered in separation (such as the 'linguistic chapters', 1-4, or the Sea-Battle Argument of chapter 9), cannot be fully understood in isolation from the rest.

one would decide, with respect to a thought, whether it is affirmative (i.e. of things as connected) or negative (of things as disconnected).

On our model of the Aristotelian statement-making utterance, Ackrill's problem concerning the suitably-placed 'not' may be rephrased thus: When representing a thought such as 'Socrates is not pale' as follows:

(1) 'Is: [(Socrates<sub>&</sub>not-pale)'s be-ing]', or

(2) 'Is not: [(Socrates<sub>&</sub>pale)'s be-ing]',

which of the 'nots' is decisive for identifying a negative statement? To Aristotle, such questions are, I take it, easily decidable — from the formal point of view, that is; for it is the denial of the assertoric operator that counts, rather than the negation of the assertible.<sup>191</sup> But from the material point of view, he deems the question to be irrelevant, as is clear from a parenthetical remark found in the third book of *De anima*:

*An.* III 6, 430b1-4: Falsehood always involves a combination; for even if you assert what is pale not to be pale you have included 'being-not-pale' in a combination. But it is equally possible to call all these cases 'separation'.

In the first sentences (430b1-3), Aristotle goes for our option (1), while the subsequent line makes clear that (2) is a reasonable alternative. So Ackrill's accusation is out of line, because the trouble only starts if the anatomy of the later, *un*Aristotelian 'S = P' construal is imposed on Aristotle's statement-making utterance. It should be recognized, however, that Aristotle's view of the matter includes his ambivalent use<sup>192</sup> of the technical terms λόγος, φάσις, κατάφασις and ἀπόφασις, and ἀντίφασις, to stand indiscriminately for expressions on the onomastic or the apophantic level.<sup>193</sup>

Another suggestion we need to look into concerns the claim put forward by Whitaker (80-2), who believes that Aristotle did not have the idea of a denial ranging over the sentence as a whole, but only knew of what is called 'internal negation'. In his view, Aristotle sees a negation as an assertion which alleges the separation of the elements that an affirmation represents as combined. A better notation to represent this view, Whitaker (81) takes it, would be to write the affirmation as 'a + b', and the negation as 'a - b', because this would

<sup>191</sup> Note that also what is said at *APo.* I 25, 86b34-36 and II 3, 90b33-34, supports my interpretation of the negative assertion.

<sup>192</sup> Semantic ambivalence is discussed in my section 1.72.

<sup>193</sup> See De Rijk (1987), 40-43, and my section 2.2.

reflect Aristotle's belief that negation is internal to the assertion, and involves altering the relation between 'subject and predicate' from combination to separation.

Whitaker's thesis seems to contradict the fact that Aristotle recognizes apophantic utterances such as are found in his analysis of affirmation and negation in *Met.* Δ 7, where, alongside the internal negation of the (negative) assertible, the external negation bearing on the assertoric operator ranging over the assertible occurs.<sup>194</sup> In actual fact, Whitaker seems to confuse the negation of an assertible and the denial of the complete statement-making utterance. He has well observed (*ibid.*) that truth and falsehood form no part of Aristotle's definition of contradiction, but fails to infer the right conclusion from it. What he fails to realize is that the pairs making up the contradiction are mostly, if not all the time, represented by Aristotle as contradictory *assertibles*, which as such, i.e. without actually being asserted or 'de-asserted', are not yet true or false. They should not be identified with fully-fledged assertions, which have by nature a truth-value.<sup>195</sup> In the final analysis, the above-mentioned misunderstandings are all due to mistaking the modern 'S is P' construal for a correct notation of Aristotle's statement-making utterance.<sup>196</sup>

Another objection to Whitaker's view is that Aristotle more than once suggests (e.g. *An.* III 6, 430a30-b3, just referred to) that the negation too bears on a combined assertible, and, accordingly, is called a combination, rather than a separation. Moreover, on his interpretation it is difficult to make sense of Aristotle's lenient remark (*ibid.*, 430b3-4) to the effect that "it is equally possible to call all the cases of combination 'separation'". If Aristotle's idea of negation really was that of the internal negation, with the exclusion of the external one, this token of tolerance would be rather puzzling.

Returning now to the opening lines of chapter 6, affirmation and negation are defined on the apophantic level, in terms, that is, of statement-making, since their common generic characteristic is ἀπόφανσις ('enunciation'), a term that is always used on the level of statement-making:<sup>197</sup>

<sup>194</sup> See Ross *ad loc.* (I, 308), and my sections 8.51-8.52 in Vol. II.

<sup>195</sup> Therefore, Whitaker's (79) 'Rule of Contradictory Pairs (RCP)' running 'Of every contradictory pair, one member is true and the other false' seems to incorporate an intrinsic ambiguity, which is disastrous to his general thesis about the exceptions to RCP, discussed 83-131.

<sup>196</sup> See my sections 1.51; 2.14-2.16.

<sup>197</sup> See my section 2.21.

*Int.* 6, 17a25-26: An 'affirmation' is an enunciation (ἀπόφανσις) <saying> something of something, a 'negation' an enunciation <denying> something of [ἀπό, lit. 'from'] something.

In fact, in this passage 'negation' is used in the sense of 'denial', which, grammatically speaking, contains the negative particle 'not' added to the assertoric operator.<sup>198</sup> However, the definition also applies to a negation on the onomastic level, i.e. one bearing on a negative assertible, such as '[ (Socrates&not-pale) 's be-ing]'. As will be clear from the following chapters (from 7, 17b16 onwards), Aristotle also uses the term ἀπόφανσις outside the apophantic level to stand for such negative phrases, in the sense of negated more-than-one-word expressions.

The same usage features in the remainder of the chapter, in which affirmation and negation, and their interrelationships (whether or not 'contradictory') are further assessed. As a matter of fact, up to 7, 17b12, the contradiction issue, too, is described in terms of statement-making ('enunciation'). Contradiction then is assessed in the context of disputation, in which contradictory states of affairs may actually be asserted or 'de-asserted':

*Ibid.* 6, 17a26-34: Now it is possible to enunciate of what holds that it does not hold, and of what does not hold that it does hold, and also of what holds that it holds and of what does not hold that it does not hold; likewise for times outside the present. So it must be possible to deny whatever anyone has affirmed, and to affirm what anyone has denied. Thus it is clear that for every affirmation there is an opposite negation, and for every negation an opposite affirmation. Let us understand by 'contradiction': a pair consisting of an affirmation and negation that are opposite.

Next, the property of 'being contradictory' is defined as bearing on the members of the contradictory pair of assertions:

*Ibid.* 6, 17a34-35: I speak of 'being opposite' in the case of a pair whose members are saying the same thing of something.<sup>199</sup>

<sup>198</sup> Things seem to be a bit more complicated because of the English idiom, in which the substantive 'negation' is more broadly applicable (both to negative phrases and negative sentences) than the verb 'negate', which cannot be used for denying sentences.

<sup>199</sup> One affirmatively, the other negatively; cf. *APr.* II 15, 63b35-36. On this view, the negation is external to the combination expressed by the assertible. Likewise the quantifier is sometimes represented as external to the assertible, as is also the case with the time-designator (see *Int.* 5, 17a11-12), but at *An.* III 6, 430a31-b1; b4-6, it is said to be included in the 'combination' ('assertible').

This means that, in this context, at least, to Aristotle a pair of contradictory assertions has the form of e.g. (using our notation)

‘Is: [(Socrates&pale)’s be-ing]’, as opposed to  
 ‘Is not: [(Socrates&pale)’s be-ing]’.

In the concluding lines 17a35-37 the disputational aspects of contradiction come up again when the author explains the role of the assertible. In order to produce a contradiction, he warns us, the terms of the assertible should be taken unequivocally and satisfy all other such conditions that are added to counter the troublesome objections sophists usually come up with.

### 3. 5 *On opposition in general*

Of course, contradiction is not the only type of opposition. In order to identify genuine contradiction, which is pivotal for having a veritable disputation, we must oversee the picture of all possible oppositions, and also consider the different forms of the assertibles expressing certain states of affairs.

#### 3. 51 *The different ‘states of affairs’ (πράγματα)*

Along these lines, Aristotle first proceeds (in chapter 7) to list the several states of affairs (πράγματα) which may be mutually opposed. To this end, they are divided into universal and singular states. A universal state of affairs is one that by its nature is said<sup>200</sup> of a number of things, while a singular one is not. For instance, being-a-man<sup>201</sup> belongs to the states which are universally assignable; being-Callias to those that are only singularly assignable. So it must sometimes be of a universal state that one asserts that something holds or does not hold; sometimes of a singular one (17a38-b1).

Next, it is stated that there must be, accordingly, two different ways of enunciating that something falls to a πρᾶγμα or does not, viz. one concerning a universal state, the other bearing on a singular state (17b1-3). As for the universal states, they may be involved in an act of

<sup>200</sup> For κατηγορεῖσθαι = ‘be said’ in the sense of ‘be attributed or assigned’, rather than ‘be predicated’ in a ‘S = P’ construal see my sections 1.51; 2.14-2.15.

<sup>201</sup> For the rendering ‘being a man’ used for ἄνθρωπος taken as the pragma ‘being a man’ see my section 1.64.

universal assignment or non-universal assignment. Two main types are distinguished accordingly:

*Ibid.* 7, 17b3-12: If concerning <what is indicated by an onoma signifying><sup>202</sup> a universal, one enunciates that something<sup>203</sup> falls to it universally or does not, there will result<sup>204</sup> contrary enunciations; examples of what I mean by ‘enunciating universally of a universal’ are ‘Is in every instance<sup>205</sup>: [(man&pale)’s be-ing]’ and ‘Is in no instance: [(man&pale)’s be-ing]’. But when one enunciates something of a universal, but non-universally, then the enunciations are not contrary, though what one intends to disclose<sup>206</sup> may be contrary. Examples of what I mean by ‘enunciating of a universal non-universally’ are: ‘Is: [(man&pale)’s be-ing]’<sup>207</sup> and ‘Is not: [(man&pale)’s be-ing]’.<sup>208</sup> That is because (γάρ)<sup>209</sup> although man is a universal, <the speaker><sup>210</sup> does not use the enunciation [viz. ‘Is: [(man&pale)’s be-ing]’] as universally applying. <<This ‘non-universally’ does not discard the fact that there could be a universal>>,<sup>211</sup> for ‘every’ does not signify the universal but only that it is taken universally.

To prevent any misunderstanding, let it be stated that universal and non-universal assignments must always bear on the hypokeimenon involved (which is indicated by the onoma), not the rhema (τὸ κατηγορούμενον).<sup>212</sup> Hence we should not think there is yet a third type:

<sup>202</sup> This should be understood by ‘a universal’ at every occurrence. For the semantic rule see my section 1.71.

<sup>203</sup> Omitted by Minio-Palluello, but found in our oldest manuscripts, Ambrosianus and Marcianus, and with Ammonius and Stephanus. Cf. the preceding sentence (17b2) reading ὥς ὑπάρχει τι ἢ μὴ.

<sup>204</sup> I.e. if the assertibles opposed to one another are actually asserted (‘enunciated’).

<sup>205</sup> The quantifier seems to be taken by Aristotle to be part of the operator, rather than of the assertible.

<sup>206</sup> Taking the present participle *de conatu*. The distinction between what one’s words mean and what one intends to express by them plays a similar role in *Top.* V 5, 134a5-17 (Whitaker, 85, n. 5).

<sup>207</sup> Meaning: ‘There is a man who is pale’ or ‘Some man is pale’.

<sup>208</sup> I.e. ‘There is a man who is not-pale’ or ‘Some man is not-pale’.

<sup>209</sup> The conjunction γάρ introduces the explanation of the somewhat surprising remark at 17b8: “although ... etc.”.

<sup>210</sup> The sequence ‘verb *plus* dative’ seems to exclude the possibility of taking the dative τῇ ἀποφάνσει to stand for ἐν τῇ ἀποφάνσει, as Ackrill (48) takes it.

<sup>211</sup> One should supply something like this. In elliptical contexts the conjunction γάρ is often used to introduce the explanation of that which is omitted; see Liddell & Scott s.v. 3.

<sup>212</sup> The κατηγορούμενον at 17b13 and 14 is commonly (see e.g. Weidemann, 211f.) taken to have the unusual sense of ‘subject’ instead of ‘predicate’; but there is no need for it, I think, nor for Weidemann’s insertion of a third καθόλου at b15. For the rest, his arguments (211-3) for adopting (with Ammonius, Stephanus, and Boethius) another καθόλου at b13 are convincing.

*Ibid.*, 7, 17b12-16: But in case of an attribute universally assigned, to take this attribute universally as well, is not a genuine procedure;<sup>213</sup> for no affirmation at all will be genuine in which, by using the word 'every', the notion 'universally' will be assigned to what is universally attributed, e.g. \*'Is in every instance: [(man&every animal)'s be-ing]'.<sup>214</sup>

### 3.52 *On universal and partial quantification*

An item that deserves our early attention is Aristotle's use of the technical term καθόλου. In the substantivated expression τὸ καθόλου, it serves to signify a universal form immanent in an outside thing, and, accordingly, it is used intensionally in such cases. This sense occurs e.g. in the phrase τὰ καθόλου πράγματα. In the adverbial expression καθόλου, however, the word is extensionally used to qualify the logical operation of assigning some form (signified by a rhema) to some substrate (ὑποκείμενον) indicated by an onoma: to express, that is, that the assignment universally applies to every member of the class designated by the substrate term. In the present text it occurs, grammatically speaking, as the qualifier of the action 'to enunciate' (ἀποφαίνεσθαι), and logically, as the quantifier of the substrate term. This is clarified by Aristotle at 17b10-12, where the use of the adverbial expression is explained in contradistinction to its substantival use. Its logical use as a quantifier distinctively comes to the fore in that Aristotle's words imply that it is the speaker who, to his liking, restricts the universal applicability of the universal term.<sup>214</sup>

What are we to understand, then, by the phrase (at 17b7) μὴ καθόλου? Does it mean (a) that the speaker objects to taking the universal universally ('it does not apply to all', which comes to 'I reject the use of the universal quantifier'), or (b) that he refrains from taking it universally ('I do not say that it applies to all' or 'I simply do not use a quantifier'). From the context it is patently clear that the phrase τὸ μὴ καθόλου ἀποφαίνεσθαι (17b9) is used in sense (b), and so is appropriately rendered 'not to enunciate universally that something applies', rather than 'to enunciate that something does not universally apply'. Option [b] implies that in fact the enunciations meant here are the ones that came to be labelled 'indefinite

<sup>213</sup> Cf. *APr.* I 27, 43b17-21. *Pace* Weidemann, οὐκ ἔστιν ἀληθές (17b13-14) means 'it is not correct', rather than that it involves any truth-value. Cf. *APr.* I 27, 43b20-21, where Aristotle says that such sentences as 'every man is every animal' are "useless and impossible"; we would say 'incongruous'.

<sup>214</sup> Whitaker aptly refers (81, n. 4) to 14, 23b6-7, where a similar use of the adverb ἐναντίως (as opposed to the substantivated ἐναντία) is found.

propositions'<sup>215</sup>, i.e. propositions that leave the question of quantification open.<sup>216</sup>

Before discussing Aristotle's list of statement-making utterances arranged according to quantification it may be of some use to examine Aristotle's division of syllogistic premisses in the opening chapter of *Prior Analytics*. There they are classified (I 1, 24a16-22) according to whether they are qualified by the adverbial expression καθόλου ('universally'), or the phrase ἐν μέρει ('partially'), or the adjective ἀδιόριστος ('indefinite'), and instanced by samples having subjects to which the words 'all', or 'some', or neither are attached. By 'universal' the premiss is intended that says something to fall to all or no instances; by 'partial' the premiss saying that it falls to some or not to some or not to all; whereas indefinites say that something does or does not fall, without any mark to show whether it falls universally or partially, e.g. 'that contraries are subjects of the same discipline', or 'that pleasure is not a good'.

Although in ch. 7 of *Int.* partial sentences are not completely ignored, as we can gather from the examples (17b19-20; 25-26), they are not mentioned as a separate class like in the *APr.* It seems reasonable to assume that Aristotle rates them with the indefinite sentences among the non-universal sentences.<sup>217</sup>

One may now wonder whether partial statements are perhaps logically equivalent to indefinite ones. This question cannot be answered properly without considering the different ways in which either of them function in actual circumstances. What I mean to say may be clarified in light of the syllogistic procedures as described in *Prior Analytics*.

<sup>215</sup> Unlike Ackrill (from 16a32 onwards), I am retaining the traditional distinction between 'infinite' (ἀόριστος) said of onomata and rhemata and 'indefinite' (ἀδιόριστος) said of statements (*APr.* I 1, 24a19, 2, 25a5). See Weidemann, 325-7.

<sup>216</sup> This identification is found as early as in the Ancient tradition (Weidemann, 203). There is a nice example of 'things not spoken of universally' as opposed to singulars at *Met.* Γ 9, 1017b33-1018a2. Discussing (b27ff.) the possible coincidence of 'man' and 'educated man', Aristotle remarks: "This explains why all these things are not spoken of universally; for it is not true to say that every man and \*the educated are the same thing, for universals hold good in their own right and things that are coincidental are not in their own right. But in the case of singulars we do so speak simply, for Socrates and educated Socrates are thought to be the same thing". Notice that Aristotle says "it is not true to say that every man ... etc.", rather than \*"it is true to say that not every man ... etc.".

<sup>217</sup> For that matter, singular sentences that have a subject indicated by a universal preceded by a demonstrative pronoun ('this man') are equally included in the class of non-universal sentences.



The syllogistic framework requires that e.g. in ‘A is said of all B, and B of some  $\Gamma$ ’ — which should lead to the conclusion ‘B is said of some  $\Gamma$ ’ (‘Darii’),<sup>218</sup> — the ‘some  $\Gamma$ ’ should be taken for the same referents in both premisses; otherwise the syllogism is invalid. But on every occurrence of an invalid syllogism, the syllogistic mode is invalid precisely owing to the fact that the quantifier ‘some’ cannot guarantee a reference to the same things. Hence the partial sentence is equally poly-interpretable as the indefinite one. That is why in *APr.* Aristotle discards the (‘subcontrary’) opposition between the partial affirmative and the partial negative, contenting himself with the contrary and the contradictory opposition:

*APr.* II 15, 63b22-30: In what figure it is possible to draw a conclusion from premisses that are opposed, and in what figure this is not possible, will be made clear as follows. Verbally (κατὰ τὴν λέξιν), I take it, four kinds of opposition are possible, viz. universal affirmative to universal negative, universal affirmative to partial negative, partial affirmative to universal negative, and partial affirmative to partial negative. In reality (κατ’ ἀλήθειαν), however, there are only three, for the partial affirmative is only verbally opposed to the partial negative. Now, of the genuine opposites I call those opposites which are universal ‘contrary opposites’ (ἐναντίας), viz. the universal affirmative in opposition to the universal negative, e.g. ‘that every discipline is weighty’ to ‘that no discipline is weighty’; the others I call ‘contradictory opposites’ (ἀντικειμέναις).

From the perspective of *APr.*, two things are patently clear: (a) the partial and the indefinite expressions are equally poly-interpretable, as far as the issue of quantification is concerned, and (b) both of them need an additional determination to dispose of their poly-interpretability. To begin with item (b), in matters of syllogistics, the premiss’s unequivocity required for there to be a valid syllogism is procured in a way<sup>219</sup> by the authorized syllogistic scheme.

What about the indefinite expression, then, as it occurs in *Int.*, ch. 7? Whenever its non-universally quantified subject-term — e.g. ‘man’ in ‘Is: [(man&pale)’s be-ing]’ as opposed to ‘Is not: [(man&pale)’s be-ing]’ at 17b9-10 — is used with reference to two different things falling under the same class, Man (viz. a pale man and one of different colour), the affirmative sentence and its negative counterpart are straightforwardly excluded from genuine opposition. And, contrariwise, if ‘man’ twice refers to one and the same substrate the

<sup>218</sup> *APr.* I 4, 26a23-25.

<sup>219</sup> To some extent, indeed, since the sophist can still deliberately go for the wrong interpretation.

expressions are susceptible of genuine opposition. This is, I take it, what Aristotle has in mind when he adds (17b8): “though what one intends to disclose may be contrary”, meaning that if one implements the assertibles such as to make them contrary their ambiguous meanings disappear and, by the same token, they become contrary.

Taking up now item (a), in a way the partial affirmative and negative sentences are logically equivalent to their indefinite counterparts, if we are liberal enough to put on a par ‘to be equally poly-interpretable’ and ‘to be logically equivalent’. Anyhow, the decisive point is that in the context of the opposition of sentences as under discussion in *Int.*, chapter 7, the indefinite expressions, apart from the incidental proviso of 17b8, can play no part at all, whereas the partial affirmative and negative sentences only feature in so far as they are opposite to the universal negative and the universal affirmative, respectively, because even though the former might be poly-interpretable, this does not preclude them from being opposite to the latter.

### 3. 53 *On contrary and contradictory opposition*

As is clear from our foregoing discussions, only two pairs of opposites will be taken into serious consideration by Aristotle, the contraries and the contradictories. As a matter of fact, as early as in Antiquity two other oppositions came into use, viz. those between subcontraries and between subalternates, which, together with the pair of contrary opposites, form the so-called square of oppositions, whose diagonals represent the two pairs of contradictories.<sup>220</sup> Subcontrariety exists between the partial affirmative and the partial negative, e.g. ‘some man is pale’ and ‘some man is-not pale’, which according to the traditional labels are called the *I* and *O* sentences, respectively, and subalternation is found between the partial and the universal affirmatives (*I* and *A*), and the partial and universal negatives (*O* and *E*).

The subcontrary opposition is of little or no use in a disputation, because subcontraries may be both true, and to Aristotle’s purpose in chapter 7, in particular, as generally in *Int.*, they are of no interest at all, since they do not satisfy the basic requirement of attributing the same thing to one and the same thing; on the contrary, for sentences to be subcontraries, their subjects (substrates) must be different. In

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<sup>220</sup> Weidemann, 204f.

point of fact, each member of the pair of subcontraries only has significance in the square of opposites in its capacity of being the contradictory opposite of *A* and *E*.<sup>221</sup> The subalternates, on the other hand, may be of some use in logical argumentation, because the partials *I* and *O* can be inferred from their universals, *A* and *E*, respectively, but not the other way round, since, strictly speaking, subalternation is a unilateral relationship. Generally speaking, qua members of a subcontrary or subalternate opposition, the *I* and *O* sentences are not important for the present discussions; they only play a role separately as being involved in contradictory opposition, to wit *I* with *E*, and *O* with *A*.

Contradictory opposition is not only found (17b16-20) between the universal affirmative (*A*) and the partial negative (*O*), and the universal negative (*E*) and the partial affirmative (*I*), but between two opposite singulars as well (18a2). It is operationally defined:<sup>222</sup>

*Ibid.*, 7, 17b16-20: An affirmation, I take it, is contradictorily opposed to a negation when one signifies something to be universally assigned to something universal, while the other signifies that this is not universally the case. For instance, the pair 'Is in every instance: [(man&pale)'s be-ing]' — 'Is not in every instance: [(man&pale)'s be-ing]', or 'Is in no instance: [(man&pale)'s be-ing]' — 'Is in some instance: [(man&pale)'s be-ing]';<sup>223</sup>

and so is the contrary opposition:

17b20-22: The expression which universally affirms something of something universal, and the one that universally negates this assignment are contrarily opposed one to another. For instance, 'Is in every instance: [(man&just)'s be-ing]' and 'Is in no instance: [(man&just)'s be-ing]'.<sup>224</sup>

The definition of the contraries is followed by a remark on the issue of truth-value, to the effect that, on this definition<sup>224</sup> of contrary

<sup>221</sup> For them to be involved in a contradictory opposition the (possibly) indefinite status of their partial subjects is immaterial. Whitaker (79) rightly remarks that the subcontrary oppositional unit 'man is pale' — 'man is not pale' is, as it were, an abstraction from ordinary language, since it is not a quotation from ordinary speech, in which 'man' is likely to stand both times for the same subject. Instead it is the structure of the square of oppositions that makes 'man' here stand for different subjects.

<sup>222</sup> Ackrill has well observed that the Greek text looks corrupt. I follow Weidemann's (90; 214) reading of the garbled text.

<sup>223</sup> The Greek adds the indefinite noun to the operator ἔστι, rather than to the substrate ἄνθρωπος. This suggests that Aristotle takes the quantifier as part of the operator, rather than of the operandum (the assertible).

<sup>224</sup> My rendering of διό (lit. 'therefore').

opposition, it is impossible that two contraries (*A* and *E*) are true together, while their respective contradictories (*O* and *I*) may both be true with reference to the same thing, e.g. 'that not every man is pale' and 'that some man is pale'. Clearly, in the last expression it is not claimed that it is possible for contradictories to be true together, but only for *I* and *O*, which happen to be the contradictories of *E* and *A*, respectively.

The next section proceeds with a discussion of three types of contradictory pairs. First, the one of our *A-O* and *E-I* type (17b26-27); then, the pair made up by the affirmative singular and the negative singular: 'that Socrates is pale' and 'that Socrates is not pale' (b28-29). Of all these it is claimed that if one member is true the other is false, and the other way round. With respect to the 'either truth or false' issue, Aristotle makes us aware that the third type is special.

### 3. 54 *Does Aristotle's concept of 'contradiction' differ from ours?*

From as early as Ammonius's days, commentators have had difficulties with the third group. The chief question is whether Aristotle's concept of contradiction is different from ours, in that he counts what was later labelled *I* and *O* sentences, which may be true at the same time, as contradictory. In that case he must seem to adopt an exception to the rule that the members of contradictory pairs always divide truth and falsehood.<sup>225</sup>

To my mind, Aristotle's concept of contradiction is quite the same as ours. There is, however, a common misunderstanding about the identity of the sentence-pairs making up the third group. The members of a contradictory pair falling under the third group are defined as being "about a universal not taken universally" (17b29-30) and, accordingly, must be the partial affirmative and the partial negative bearing on the same universal thing. Whoever, like Aristotle, labels them contradictory must assume that these partials concern the same part of the extension of the same universal, since the sameness of the subject (substrate) is the basic requirement for there to be a genuine contradiction (6, 17a34-35). For instance, 'this man is pale' and 'this man is not pale' are a pair of contradictories, provided that in either assertible the term 'man' refers to the same human being. On this condition, these expressions form a genuine pair of contradictories,

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<sup>225</sup> Ackrill (129f.), Weidemann (206ff.), and particularly Whitaker (3; 79-131).

of which it holds that what is expressed by them cannot both be the case at the same time. However, this very proviso guarantees that they are not *I* and *O* sentences, since the *I* and *O* partials can only be the contradictory opposites to *E* and *A* if their partial subjects refer to *different* things.

Another weakness of the common interpretation of Aristotle's exception of *I* and *O* sentences is that it fails to recognize the crucial difference between contradictory assertibles taken by themselves and contradictory assertions.<sup>226</sup> The former are significative, but non-assertive, as long as they are not actually used in an assertion. This distinction plays the pivotal role in Aristotle's explanation of the rule about this third kind of contradictory pair.<sup>227</sup> His explanation of what he claims about the truth issue (saying "their members may be both true at the same time") is somewhat obscured by the fact that he contents himself with raising and nullifying a possible objection against his view (17b34: "this might seem absurd at first sight").

The seeming absurdity discussed at 17b34-37 is based on the observation that, at first sight, the negative member of the contradictory pair

(a) '[man & pale]'s be-ing' — '[man & not pale]'s be-ing'

may be taken to be equivalent to 'no man's being pale'. On the face of it, this observation seems to be correct, and may then be employed to frame the argument running: "On this equivalence, the initial formula (a) matches

(b) 'Is: [(man & pale)]'s be-ing' — 'Is in no instance: [(man & pale)]'s be-ing'".

But evidently, of the members of (b) it does not hold that they may both be true at the same time. As a matter of fact, it turns out that to assume the equivalence is unjustified, Aristotle claims. First of all, (the assertible) '[no man's being pale]' does not signify the same as '[man's not being pale]', formally speaking, and, secondly, when it is actually used in an assertion, it does not hold at the same time as '[man's not being pale]', since the latter expression may be true if only some men are not pale, while others are.

<sup>226</sup> To mix these two up is part and parcel of the misapprehension of the anatomy of the Aristotelian statement-making utterance.

<sup>227</sup> And in many other cases too; my section 2.16.

Unfortunately, once the seeming counter-argument (i.e. the seeming absurdity) has been rejected, Aristotle leaves it at that, leaving it up to us to save appearances. Aristotle's exposition of the truth issue is commonly regarded as unclear and even confusing.<sup>228</sup> To my mind, the obscurity disappears if we, once again, sharply distinguish between assertibles taken on their own, which are significative but non-assertive (in the same way as samples are),<sup>229</sup> and the same assertibles when actually used in an assertion. All Aristotle means to say at 17b29-32 is that when members of a contradictory pair of the third type are actually involved in an assertion, something happens to them which cannot possibly occur to any of those of the two other types, to wit they may both be true at the same time. The reason for this remarkable feature is that, unlike the universally quantified subjects, the partial ones may refer to *different* groups of the same class of universal things, owing to which the affirmative and the negative member may both be true at the same time; in other words, they are suitable for being applied in assertions that are true simultaneously. Hence it is *the user* of the formally contradictory assertibles who applies the substrate (subject) 'man' to different referents, whereas in the unapplied opposition of assertible (a) to (b) the reference is not an issue, for the simple reason that it was not applied at all.

Aristotle seems to suppose that anybody can see at once that when the assertibles (a) and (b) are used in actual assertions, *eo ipso* the basic requirement for there to be a genuine opposition breaks down, so that they no longer make up a contradictory pair either.<sup>230</sup> This is less strange than it might seem, since in a dialogical situation the opponent's task is to reposit the respondent's assertion 'man is pale' by maintaining that its opposite 'man is not pale' may be equally true at the same time. When taken in the sole context of being mutually opposed, the assertibles (a) and (b) concerned the same part of the universal thing and, accordingly, stood up to the general rule for contradictory opposites ('*either true or false*'). Once they are taken, in a dispute between opponent and respondent, to stand for different

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<sup>228</sup> Weidemann, 215f.

<sup>229</sup> E.g. samples written on the blackboard, such as 'No man is sane', or 'There is an earthquake here and now', or Aristotle's frequent use (in surface structure) of dictums like 'that-Socrates-is-a-pale-complexioned-musician', none of which are meant as assertions.

<sup>230</sup> Of course, to argue 'they may both be true at the same time; therefore they are no longer contradictory' would be a *petitio principii* in this context, ignoring the difference between applied and unapplied assertibles.

things, they are no longer affected by whatever rule concerning the only two Aristotelian modes of opposition (contrary and contradictory),<sup>231</sup> and, using the post-Aristotelian square of oppositions, they now act as our subcontrary *I* and *O* sentences.

By failing to observe the decisive distinction between assertibles on their own and assertibles actually used in an assertion, Whitaker (3; 79ff.) could arrive at his thesis that Aristotle admits three exceptions to what Whitaker baptizes the 'Rule of Contradictory Pairs' (RCP): "Of every contradictory pair, one member is true and the other false" (79). Like any other 'proposition' (taken in the modern sense), members of contradictory pairs are neither true nor false until they are applied in actual assertions.

To my mind, the above distinction is hinted at by Aristotle's explicit use of a *verbum declarandi* (17b31: εἰπεῖν) or a *that*-clause (17b35: ὅτι).<sup>232</sup> Admittedly, this distinction is often unimportant. For example, in cases concerning the first two types of contradictory pairs, like the ones discussed at 17b26-29, the expressions ἔστι Σωκράτης λευκός and οὐκ ἔστι Σωκράτης λευκός are indiscriminately used to stand for the assertible 'Socrates's being pale' ('Socrates's not being pale') and the assertion 'Socrates is pale' ('S. is not pale'). Likewise in oppositions of the *A-I* and *E-O* type (which are not considered by Aristotle, it should be recalled), the distinction between the contradictory assertibles taken by themselves vs. they being actually used in assertions is not a matter of importance either, saying e.g. 'every man's being pale' and 'every man's not being pale' as compared to '[every man's being pale] is the case' and '[every man's not being pale] is the case'. However, in other passages of a similar complexity, the distinction will be very helpful.<sup>233</sup>

On the above interpretation, the passage under consideration may now be rendered thus:

*Ibid.*, 17b26-37: Of a pair of contradictories about a universal taken universally it is necessary for one member *or* the other to be true or false. Likewise this holds in the case of singulars, e.g. 'Socrates is pale' versus 'Socrates is not pale'. But if the contradictories are about a

<sup>231</sup> Both philologists and linguists erroneously ascribe the later square of oppositions to Aristotle, thus presenting a wrong picture of Aristotle's treatment of what was later called 'I and O statements'; e.g. Weidemann, 202-9; 215f.; Seuren (1998), 306-9.

<sup>232</sup> For really overwhelming occurrences of this hint see my discussion of chapter 9.

<sup>233</sup> My sections 2.16; 3.66; 3.69.

universal not taken universally it is not always the case that one is true and the other false. For it is true to say at the same time that 'man's being pale' is the case and that 'man's not being pale' is the case, and that man's being noble is the case and that man's being noble is not the case.<sup>234</sup> This might seem absurd at first sight, because 'man is not pale' looks as if it signifies also at the same time that no man is pale; the latter expression,<sup>235</sup> however, does not signify the same <as 'man-not-being-pale'>, nor does it necessarily hold at the same time.

### 3. 55 *On single affirmation and negation*

The next section of chapter 7 (17b37-18a7) generally infers from the foregoing lines — which so unfortunately played on the affirmation such as 'man's being pale' having more than one negation (both 'man's not being pale' and 'no man's being pale') — that it is evident that a single affirmation has a single negation. For the negation must deny the same thing as the affirmation affirmed, and *of* the same thing, no matter if the substrate thing is a singular or a universal entity, nor if it is taken universally or partially. If, on the other hand, something else is denied, or the same thing is denied of something else, there will be no genuine opposition at all, but something quite different. As far as genuine oppositions are concerned, it is stated that the opposite of 'every man is pale' is 'not every man is pale'; of 'some man is pale', 'no man is pale'; of 'man is pale', 'man is not pale'.

This section is well in keeping with the previous one. The seeming equivalence suggested by 17b34-36 is now undermined by the general rule about the 'one to one' relationship between affirmation and negation, which holds for any type of contradictory opposition, including the third one. The explanation of the rule explicitly states that both the substrate (signified by the onoma) and the attribute (expressed by the rhema) should be the same thing. When he proceeds to deal with the conflicting cases, in which these conditions are not met, the author, remarkably enough, confines himself to the discussion of the negation. He refers to 17b36-37, where negation was falsely understood, with the result that there could no longer be talk of any opposition at all, and, *a fortiori*, of any contradiction either,

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<sup>234</sup> The subsequent words occurring in our text (17b33-34): "For if base, then not noble, and if something is becoming something, then it *is* not that thing", are senseless in this context, and are rightly cancelled by Weidemann, 216.

<sup>235</sup> Weidemann wrongly takes (10) τὸ δέ to refer to the first expression.



which left the possibility open of the two expressions being both true at the same time.

The summary presented at the end of the chapter fits in well with our interpretation of its main contents:

*Ibid.*, 18a8-12: We have stated, then: (a) that a single affirmation has a single negation as its contradictory opposite, and which these are; (b) that contrary affirmations and negations are different, and which these are; and (c) that it does not hold good of every contradictory opposition that one member is true, the other false, and *why* this is so, and *when* they are either-true-or-false.

So this paragraph calls to mind once again how Aristotle emphasizes that it is not true to say of any contradictory pair that they are either true or false as such, i.e. when they are not actually applied in an assertion, and his explanation of *when* they are, to wit when they are actually used in an assertion.

This conclusion will be confirmed by what is claimed by Aristotle in chapter 9, which deals with the issue of truth-value as far as future singulars are considered. But first, there is the short chapter 8 to elaborate the notion of 'single affirmation or negation', which was already spoken of in chapter 5, since whenever, contrary to the first impression, the assertion does not contain a single affirmation or negation, the contradiction is easily frustrated.

Aristotle begins by restating the purport of what has been said in chapter 5 on account of the single statement. The sample sentences make up three clusters of opposite expressions, but the kind of opposition (contradictory or contrary) is not under consideration as yet:

*Int.* 8, 18a13-17: A single affirmation or negation is one which signifies one thing about one thing, whether about a universal significate taken universally or not. For instance, in 'Is in every instance: [(man&pale)'s be-ing]',<sup>236</sup> 'Is not in every instance: [(man&pale)'s be-ing]'; 'Is: [(man&pale)'s be-ing]', 'Is not: [(man&pale)'s be-ing]'; 'Is in no instance: [(man&pale)'s be-ing]' 'Is in some instance: [(man&pale)'s be-ing]', — still providing that 'pale' signifies some one thing.

The proviso just made leads the author to discuss cases that fail to meet this condition. He chooses an example that could be misleading, a sentence featuring one single term which signifies more than one thing, namely, his favourite camouflage term 'cloak':<sup>237</sup>

<sup>236</sup> Quite exceptionally, Aristotle here uses the colloquial word order without the emphatic ἔστι in front of the sentence, as is his usual way of exemplification, including 18a16-18.

<sup>237</sup> For this term see my section 9.32 in Vol. II. *Pace* Weidemann (220), Ackrill

*Ibid.* 8, 18a18-23: For if one name is given to two things that do not make up one thing, there is not a single affirmation. Suppose, for example, that one gave the name 'cloak' to horse and man, framing the sentence 'Is: [(cloak&white)'s be-ing]', this does not produce a single affirmation. For to say this does not differ from saying 'Is: [(horse-and-man&white)'s be-ing]', and this boils down to saying 'Is: [(horse&white)'s be-ing] and [(man&white)'s be-ing]'. So given that these sentences [viz. a22 and a 23] signify more than one thing and are not one affirmation, clearly the initial one [at a20] too signifies either more than one thing, or even nothing at all, for that matter, for there is no such thing as a 'man-horse'.<sup>238</sup>

It might seem that Aristotle's final remark is based on an alternative reading of the example sentence which takes the phrase 'horse and man' not copulatively, but accumulatively "what is horse *plus* man". However, assuming that, as often, the example sentences are meant as utterances that identify something presented to the senses, the object perceived may be identified as two white objects, viz. a horse and a man (rider), or a 'man-horse'. Whatever meaning is assigned to the 'cloak' sentence, it is definitely not a single statement.

Now from such samples it may be clear, Aristotle infers (18a26-27), that when it comes to assertions in whose assertibles 'cloak'-words are used — saying, for example: 'Is: [(cloak&white)'s be-ing]' vs. 'Is not: [(cloak&white)'s be-ing]' — it is not necessary either<sup>239</sup> for one member of the pair of contradictories to be true and the other false.<sup>240</sup>

There is some discussion about Aristotle speaking of 'signifying one thing' and 'making up one thing'.<sup>241</sup> I shall deal with this pivotal issue later (my section 3.81) when I discuss the opening lines of chapter 11.

### 3. 6 *The problems surrounding expressions concerning future events*

Whitaker (109) rightly observes that chapter 9 of *Int.* is normally discussed without reference to the rest of the work, and some people almost seem to regard it as a separate treatise on the problem of

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(131) is quite right in stressing that the use of the word 'cloak' has nothing to do with ambiguity of names. Aristotle is instead discussing the assignation of one unambiguous name to what is not a genuine unity.

<sup>238</sup> For this rendering, preferable to Ackrill's "because no man is a horse", see Weidemann, 221.

<sup>239</sup> I.e. not only with indefinite assertions, spoken of earlier. Weidemann, 221.

<sup>240</sup> Ackrill, 132.

<sup>241</sup> Ackrill, 131f.; Weidemann, 218-20.

determinism. The way he himself goes about it is to approach this chapter afresh on the basis of chapters 7 and 8.

Whitaker (111f.) criticizes the general assumption among commentators (he refers to Ackrill, 134) that Aristotle's interest in chapter 9 does not concern what he calls 'the Rule of Contradictory Pairs (RCP)', but the principle of bivalence, running "Every assertion is either true or false". According to Whitaker, it is the other way round. In his view it is RCP that the chapter is concerned with, not the principle of bivalence, which, as such, concerns any kind of assertion and not just the members of a contradictory pair. Whitaker (112) is of the opinion that if Aristotle had devoted chs. 7 and 8 to an investigation of whether the principle of bivalence holds of isolated assertions (i.e. those not involved in contradiction), he would have found no exceptions.

In the subsequent discussion I shall argue that the central problem of chapter 9 is *how* to assign truth and falsehood to assertions about future events. *Pace* Whitaker, it is the validity of the semantic principle of bivalence that is in the forefront of Aristotle's attention, but this in no way leads him away from the basic problems of contradiction.<sup>242</sup> Besides, there is no exception to the law of non-contradiction (or Whitaker's RCP) found in chapter 9 (nor elsewhere). Once again, the distinction between unapplied assertibles (which, by nature, lack truth-values) and assertibles applied in actual assertions is at the basis of Aristotle's defence of the overall validity of the principle of bivalence.

### 3. 61 *Some introductory remarks*

As early as thirty-five years ago Ackrill (132) had good reasons to remark that chapter nine of *Int.* "has provoked vigorous discussion ever since it was written and not least in the last few years". The following years have confirmed Ackrill's view overwhelmingly, as is eloquently demonstrated in Weidemann's extensive report and discussion (300-24) of the many different ways in which, from the

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<sup>242</sup> See my earlier remark on the syntactical nature of Whitaker's RCP. — Whitaker's (114, n. 5) criticism of Anscombe (1956, 1f.) first reading 18a30 as a statement of the principle of bivalence, and immediately afterwards paraphrasing 18a31-32 as pertaining to the law of non-contradiction, is no more to the point than his blaming Ackrill (133f.) for first seeing 18a28 as a statement of RCP, but then taking Aristotle to switch to a discussion of the principle of bivalence at 18a34.

first Peripatetics onwards, this chapter has been commented upon.<sup>243</sup> Ackrill thinks — quite understandably, for that matter — that Aristotle's brevity and lack of sophisticated technical vocabulary make it difficult to decide what he is maintaining, and so wisely confines himself to opening up some of the difficulties and offering some suggestions as to how this chapter may be read.<sup>244</sup>

The basis of the dramatic modern reading of chapter 9 was provided in 1930, when Jan Lukasiewicz (1951, 63f.) claimed that the Law of Bivalence ("Every proposition is either true or false")<sup>245</sup> was familiar to Aristotle, but that he did not accept its validity for propositions dealing with contingent future events. In Lukasiewicz's view, Aristotle believed that determinism would be the inevitable consequence of this law, a consequence he was unable to accept. Hence Aristotle was forced to restrict its validity. Thus Lukasiewicz was of the opinion that Aristotle was faced with a dilemma: he must either accept determinism including its radically counter-intuitive implications, or deny what he had declared before (4, 17a2-3) to be the essential nature of propositions. According to Lukasiewicz, Aristotle simply grasped the second horn of the dilemma, restricting the validity of the law of bivalence to propositions about past and present events, and necessary future events.<sup>246</sup>

In Antiquity most thinkers were of the opinion that this was indeed the choice Aristotle made. Among them, the Stoics were convinced that Aristotle had actually grasped the wrong horn of the dilemma, because to them it is the very foundation of logic that whatever is stated is either true or false, and faithful to their own principles, they professed determinism.<sup>247</sup> This view of Aristotle's stand is commonly called 'the traditional interpretation', despite the fact that there are rival interpretations just about as old.<sup>248</sup>

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<sup>243</sup> Weidemann's report will become still more impressive if his own discussion (223-99) is added; see also Weidemann (1997). The global features of the scholarly debate up to 1984 are briefly discussed in Whitaker, 129-31.

<sup>244</sup> It should be remarked in advance, however, that although he well observed (137f.) the relevance of the dichotomy made by Aristotle at 19a23-39 between unapplied assertibles and actual statements, Ackrill unfortunately failed to recognize its decisive role in Aristotle's solution to the problem of the future singulars; my sections 3.66-3.67.

<sup>245</sup> Cf. the Law of Excluded Middle (LEM) discussed in *Met.* Γ 7; my sections 7.51; 7.91 in Vol. II.

<sup>246</sup> I made use of the lucid exposition of this issue in Kretzmann (1987), 63f.

<sup>247</sup> Kretzmann (1987), 64. For the broad acceptance of Lukasiewicz's view on the matter, see Sorabji (1980), 92f; Kretzmann (1987), 87, n. 4.

<sup>248</sup> Sorabji (1980), 92. The rival interpretation (which is extensively discussed by

Turning now to the contemporary discussions, there are some commentators who appear to have little faith in either the contents of chapter 9 or their own abilities to give a reliable interpretation. Thus we find one commentator offering an eloquent tribute to the firm conviction that “tracing coherent philosophical arguments [...] is rather like finding shapes in a cloud” (D.C. Williams); another remarks that “not only can we find some evidence for almost anything we hope to see [viz. in the cloud], but the shape we think we find changes as we are looking at it” (Anne Dickason).<sup>249</sup>

Anyhow, the only thing any commentator can do is to offer her or his own view of how to read the chapter under discussion. The one presented here will be in keeping with what was put forward before on account of Aristotle’s handling of the notion of contradiction, including, as I have announced in the previous section (3.5), his clearly distinguishing between contradictory assertibles when taken on their own and when applied to outside things in an actual assertion.

The chapter falls into three parts.<sup>250</sup> In the introductory part (18a28-34) the *status quaestionis* is presented. Next Aristotle (18a34-19a6) develops an argument to show that if the well-known ‘*either true or false*’ thesis (i.e. the law of bivalence) should also apply to the case of contingent future events, then everything that happens would happen of necessity. In the final part (19a7-b4) this thesis, including the argument is rejected by Aristotle, and the author presents his own view about how the ‘*either true or false*’ thesis should be understood in the case of future singulars.

As far as the mainstream (i.e. Ancient, Medieval, and modern) analysis and evaluation of this chapter is concerned, there are two distinctive features that, to my mind, have unfavourably affected the interpretation. Firstly, the entire chapter is often regarded as Aristotle’s making an issue of the problem of determinism. By unduly bringing this problem into focus, the attention was diverted, as is well observed by Whitaker (109), from the main problem of how to apply the ‘*either true or false*’ thesis in all those cases in which in principle the assignment of a determined truth-value to an assertion is impossible. Such cases are assertions made about contingent future events, in which, unlike those about present and past things or events, the

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Kretzmann (1987, 65ff.) is the one argued for by Boethius, and, with a lot of minor variants, by Medieval thinkers. I will return to this at the end of this section.

<sup>249</sup> Quoted in Weidemann, 225.

<sup>250</sup> Ackrill, 132.

referent of the assertible is non-existent.<sup>251</sup> Rather, the chapter presents a thorough discussion of the peculiar problem surrounding Aristotle's correspondence theory of truth, in which the pungent issue of determinism plays the didactic role of seasoning the discussion. Secondly, owing to the fact that most commentators are not so much captivated by the truth and falsehood issue as they are about the problem of determinism, they tend to put most of their energy into looking for a solution to that philosophical problem on Aristotle's behalf and checking to what extent the Stagirite needs our help to transform his thoughts into more "coherent philosophical thoughts" (about the problem of determinism, of course).

The present interpretation of this chapter will attempt to focus on the central problem of how to allocate<sup>252</sup> 'true' and 'false' to assertions made about, as yet non-existent, contingent events. In light of this presentation of the problem, the key question is the one bearing on the correct understanding of the 'necessarily *either* true *or* false' issue as voiced both in the Law of Bivalence (Law of Excluded Middle, LEM) and in the Law of Non-Contradiction (LNC)<sup>253</sup> when it comes to contingent future events. In the analysis of this problem the correct understanding of the notion of semantic necessity will provide us with the key to determine the proper impact of the '*either* true *or* false' disjunction. In this context, Aristotle only means to raise the problem of determinism, or rather fatalism, in order to highlight the need to clear up the 'necessarily *either* true *or* false' issue. For if we fail to understand the principles upon which the application of truth and falsehood is based, we might end up with devastating consequences, and might even have to accept that we can in no way influence the outcome of future events, so that any deliberation on our part is pointless.

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<sup>251</sup> The assertible of e.g. 'This cloak will be cut up next year' does not refer properly to this cloak, but 'the-future-cloak-being-cut-up'.

<sup>252</sup> The decision problem concerning contradictory assertions about future events is clearly pointed out by Aristotle at 19a27-29, where he presents his solution to the problem: "And the same account [sc. that everything that is, is of necessity] holds for contradictories: everything necessarily is, or is not, respectively, and will be, or will not be, respectively; but one cannot distribute (διελόντα) <the truth-values> and assert 'this <member of the contradictory pair> is necessary'. In fact to Aristotle, the decision issue is the core of the problem. As we will see below, the appropriate distinction between 'unapplied assertibles' and 'fully-fledged assertions' is at the basis of Aristotle's solution to the problem.

<sup>253</sup> These laws will be discussed in my sections 7.5-7.7; 7.9 of Vol. II.

3. 62 *Status quaestionis*

The introductory part fairly summarizes the upshot of previous discussions, applying the views argued for there to utterances about the present and the past:

*Int.* 9, 18a28-33: With reference to what is and what has been the case it is necessary for the affirmation or<sup>254</sup> the negation to be true or false. That is to say,<sup>255</sup> with universals taken universally it is always necessary for one to be true and the other false, and with singulars too, as we have said, while with universals not brought up universally, it is not necessary.

As for the last group, we are reminded (18a31-32) of the possibility that of the partial affirmative and negative making up a contradictory pair of assertibles the members are both true at the same time, in special circumstances, that is, those that were explained at 17b29-37, and referred to at 8, 18a11 (πότε). Thus Aristotle alludes to the fact that as long as contradictory assertibles are not applied in actual assertions, they can be both true and false. This is to say that each is capable of acquiring either one of the two truth-values, and not, of course, that they are capable of being both true and false at the same time.

Subsequently, the special problem of the future singulars is introduced:

*Ibid.*, 9, 18a33-34: But with singulars that are going to be<sup>256</sup> things are different.

Take for instance, using our notation,<sup>257</sup>

(a) 'Is: [(this cloak&cut-up-in-the-future)'s be-ing]',

as opposed to

(b) 'Is not: [(this cloak&cut-up-in-the-future)'s be-ing]'.

Before embarking on the discussion of our special problem, three incidental remarks may be useful. Firstly, in the case of assertions

<sup>254</sup> The particle ἢ is used in the sense of a weak alternative coming close to a conjunction, to express that what is said of one object indiscriminately holds of another, too. E.g. Homer, *Iliad* I, 138: "I shall possibly help myself by taking your gift of honour, or that of Aias, or Odysseus's"; Cf. Sophocles, *Antigone*, 707-9.

<sup>255</sup> I take καί to be explicative.

<sup>256</sup> A similar phrasing for future things is found in Plato, *Sophist*, 262D2-3; cf. *Republic* III, 392 D3.

<sup>257</sup> For this notation see my sections 2.13; 3.23. — I am taking the temporal index as part of the assertible.

about singulars (not only future singulars), it makes no difference if you replace the denial (b) with the affirmation of the assertible negated, thus:

(b<sub>1</sub>) 'Is: ((this-cloak&not-cut-up-in-the-future)'s be-ing)'.

Secondly, in cases of assertions about the future or the past, it makes no sense to include the future (or preterite) tense in the operator,<sup>258</sup> since this would produce a nugatory notation, as the actual truth-value of such an alternative expression for (b<sub>1</sub>) would be expressed by 'it is true that it will be true that (...)'. Thirdly, just like the denials about the present and the past, (b) has two truth-conditions, in that (b) is true if, at some moment in the future, this cloak will actually be cut up, as well as if it is no longer in existence.<sup>259</sup>

Returning now to our special problem surrounding the future singulars, the property of 'being *either* true *or* false' is evidently assigned by Aristotle to the contradictory assertibles concerning *definite* present or past πράγματα involved in fully-fledged assertions about these things, irrespectively of their being indicated by a universal term preceded by a universal or a partial<sup>260</sup> quantifier ('every man', 'some man'), or expressed by a singular expression ('this man', 'Socrates'). Hence one would expect that the future singulars spoken of in the last sentence are definite things too. Weidemann deems (228) this a bit problematic, since, unlike with the cloak example of 19a12-16, in cases such as that of the famous sea-battle (19a29-32) at the time of the utterance there is no definite thing of which the assertion can be made.

To my mind, one has to take notice of the difference between Aristotle's use of nouns such as 'cloak', and disguised nominals like 'sea-battle', which, properly speaking, stand for a certain pragma, as e.g. 'sea-battle' stands for 'ships-engaged-in-a-hostile-encounter'. Now in the assertion 'a sea-battle will take place tomorrow', the definite substrate referred to are the definite ships of two enemy forces, which have already come close to one another.<sup>261</sup>

<sup>258</sup> Saying \*'[this-cloak's-being-cut-up] will be the case'. At *An.* III 6, 430a26-b3, Aristotle clearly has utterances in mind in which the notion of time is included in the argument or assertible, not in the operator.

<sup>259</sup> Cfr. *Cat.* 10, 13b14-19.

<sup>260</sup> It must be a partial quantifier which is definitely used, so that the two entities designated by 'some man (men)' are identical; otherwise there is no opposition at all between them, and they can only act as *our modern* I and O assertions in the contradictory opposition between E and A.

<sup>261</sup> Note that the Greek word ναυμαχία literally means \*'ship-battle'. In state-



Due attention should be paid with Ackrill (133f.) and Weidemann (225f.) to Aristotle's phrasing (at 18a28ff.) of the '*either true or false*' issue. Taking the composition of the entire paragraph 18a28-34 into consideration, at a28-29 a general rule is stated about all statements concerning present and past states of affairs or events; next (a29-33) a distinction is made within this class of statements; and, finally (a33-34), opposing statements about future states of affairs and events to the previous ones, it is claimed that with future singulars things are quite different.

In these lines Aristotle uses two rather similar phrases: (a) 'necessary for the affirmation or the negation to be either true or false' (18a28-29) and (b) 'necessary for one to be true and the other false'. Ackrill (133) rightly claims that a different meaning must be attached to each of these. Now the phrasing of (a) is used in an observation in which the particle ἢ ('or') should twice be taken to indicate a so-called weak alternative, meaning that what is said of one (the affirmation and 'truth', respectively) equally holds of the other (the negation and falsehood, respectively). *What* applies to both affirmations and negations is that it is necessary for any assertion made about the present or the past to have the truth-value it actually has (no matter whether 'true' or 'false'), meaning that once it actually *is* true, it cannot be false, and the other way round. This mode of necessity will be taken up at 19a23ff.

In the next lines (18a29ff.), the discussion becomes more specific in that the relationships between the different truth-values are discussed and the diverse ways of assigning them to the opposite affirmations and negations are examined. After drawing a distinction within the above class of statements about the present and the past, Aristotle repeats what he had claimed at 17b26-33, that in some pairs of opposite affirmations and negations — to wit, those about universals taken universally, and those about singulars — one must be true, and the other false, while in others — viz. those about universals not spoken of universally — this is not necessary, because both members may be true. It is in these observations that the alternative phrasing (b) is used, in which the weak alternative occurring in (a) is replaced by the disjunction between 'true' and 'false' expressed by the idiom

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ments made of things supposed to exist in times way beyond the time of the utterance, such as 'a sea-battle will take place a thousand years from now', the substrate of the assertion are the definite things (e.g. ships) that will be in existence at that time.

(18a30) τὴν μὲν ... τὴν δέ: one true, the other false,<sup>262</sup> and with the possible conjunction of ‘true’ and ‘true-for-the-special-case-of-statements-about-universals-not-spoken-of universally’.

In the concluding sentence (18a33-34) of the paragraph the truth-value condition of the assertions about future singulars is opposed to those of the statements concerning present and past events, and so the proper subject of the discussion developed in chapter nine is prompted. In the remainder of the chapter Aristotle first shows us the wrong way of tackling the problem of the truth-values of statements about contingent future events, particularly focussing on the so-called determinist’s or fatalistic argument (18a34-19a6), and then presents his own view of the future singulars problem, including the rejection of the fatalistic argument (19a7-38). As regards the latter, we shall see that the so-called deterministic argument developed in 18a34-19a6 precisely ignores the distinction between unapplied assertibles and assertions actually made, which is pivotal to the solution of the problem of the truth-value of future singulars.

### 3. 63 *The so-called determinist’s or fatalistic argument*

The label ‘determinist’s argument’, which is commonly used for the difficulties raised here by Aristotle against uncritically applying the ‘necessarily *either* true *or* false’ thesis, is somewhat misleading. There is no sign of any adherence to the determinist’s thesis in Aristotle’s text. Instead Aristotle aims to show that if one takes the key notion ‘necessity’, occurring in the phrases ‘necessary for the affirmation or the negation to be true or false’ and ‘necessary for one to be true and the other false’, the wrong way one is forced to accept the counter-intuitive fatalistic position “that everything is or happens of necessity, and nothing by chance or as chance has it” (18b5-7).<sup>263</sup>

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<sup>262</sup> A similar disjunction between ‘one true, the other false’ is expressed at 17b27, so that Ackrill’s and Weidemann’s worrying about Aristotle using similar phrasings confusingly is out of place. The wording of 17b27 (τὴν ἑτέραν) correctly parallels that of 18a30 (τὴν μὲν ... τὴν δέ) and cannot be put on a par with the phrasing used at 18a28-29. On the other hand, the first part (18a10-11) of the phrase found at 18a10ff. parallels 18a28-29, whereas 18a11-12 parallels 18a29-33.

<sup>263</sup> The purport of the phrase ‘as chance has it’ (Akrill) for the Greek ὅποτερ’ ἔτυχεν, and its various alternative renderings ‘random(ly)’, ‘as the case may be’, ‘whichever happens’, ‘fortuitous(ly)’, ‘indeterminate(ly)’, is aptly explained by Ackrill (136) in terms of their being opposed to ‘of necessity’. See also Weidemann, 241-8.

Throughout the fatalistic argument, the distinctive feature of assertibles taken by themselves and not being involved in truth claims is — quite unfortunately indeed — beyond the scope of interest. From the start, the ‘necessarily one true, the other false’ issue is taken up in terms of *people asserting or denying* one member of a pair of contradictory assertibles. Hence to rebuke the fatalistic argument, the distinction between unapplied and applied assertibles is of paramount importance. This makes it appealing to highlight the fact that Aristotle deliberately speaks of assertions actually made by someone, which *eo ipso* contain *applied* assertibles. The relevant portions of the text will therefore be put in bold:<sup>264</sup>

*Ibid.* 9, 18a34-b3: For if every affirmation or negation is true or false it is necessary for every thing [i.e. state of affairs expressed by an assertible] *either* to be the case *or* not to be the case.; so that if<sup>265</sup> **one person says that** something will be the case and **another denies** this same thing, it is clearly necessary for one of them to be **saying** what is true, since both will not be the case together when such (contradictory) things are in order. For if it is true **to say that** it is white or is not white, it is necessary for it to be white or not white; and if it is white, or is not white (respectively), then it was true **to say, or deny** this (respectively). And if what **is said** is not the case **the speaker** is mistaken, if he is mistaken it is not the case.

In this paragraph Aristotle is playing upon the ambivalent meaning of the terms ‘affirmation’ and ‘negation’, which in general may stand indiscriminately for affirmative and negative assertibles as well as affirmative and negative assertions.<sup>266</sup> In the conditional opening sentence (18a33-35) this ambivalence is maintained in that the decision-free property of ‘true *or* false’ is taken to be common to contradictory assertions and contradictory assertibles as well, since the phrase ‘*either* true *or* false’ in effect means ‘mutually exclusive’. But in the apodosis (18a35-37) introduced by ὥστε εἰ (‘so that’), the author infers from this assumption (which is repeated at a37-38) that, when it comes to one person actually asserting one of the (as yet unapplied) assertibles and another person actually denying it, the decision-free ‘either-or’ issue no longer holds for each assertible, but is replaced by the necessity that one of the presently applied assertibles should be true,

<sup>264</sup> As I have remarked already, Ackrill (137f.) has well observed the significance of the difference between assertibles and statements which comes to the fore at 19a22-39.

<sup>265</sup> Reading with the Ambrosianus and the Marcianus ὥστε εἰ instead of εἰ γάρ. See Weidemann *ad loc.*

<sup>266</sup> My section 2.21.

and the other false. The author is in fact only claiming that on the assumption that every affirmation (and equally every negation) has a possible truth-value, it follows that it necessarily holds of every state of affairs expressed by an assertible that, if it is applied to things or events of the outside world, it is either the case or not the case (ὑπάρχειν ἢ μὴ ὑπάρχειν).

Next in order, the case of future singulars comes up for discussion. The general rule ((18a35ff.) is applied to a pair of contradictory assertibles about a future singular, one of which is actually asserted ('forecast') by one person and the other by another. In these circumstances too, one of them must speak the truth, and the other something false, though it is impossible to *decide as of now*<sup>267</sup> whether the affirmative assertible ('*p*') or the negative one ('Not-*p*') is true.<sup>268</sup> Aristotle then takes another step by stating (18a39-b2) that the idea that there should be a reciprocal inferential relationship between the truth and falsehood of statements and the actual occurrence and non-occurrence of the events (states of affairs) expressed by their assertibles, only means that *if* an assertion (or denial) is true, then that which is asserted (or denied) is really (not) the case; and, inversely, *if* something is (not) the case the corresponding assertion (denial) is true. Aristotle (on behalf of the 'determinists') can safely claim the validity of this inferential relationship, since it is simply implied in his own definition of 'true statement'.

Next follows the decisive move of the fatalistic argument. Even granted that at the time of the contradictory utterances, it is impossible to decide whether person A or his opponent is in fact speaking the truth, it can none the less be claimed, as Aristotle in fact does (18b5ff.), that the truth of whichever of the pair of contradictories is in fact true necessitates the occurrence of the state of affairs truly forecast to occur, and the non-occurrence of this state truly forecast not to occur, respectively. Contrary to Aristotle,<sup>269</sup> the determinist takes this necessity to be a physical condition of the pragma involved in the assertion. This conclusion is not inevitable, however, for the

<sup>267</sup> This is most explicitly stated at 19a29.

<sup>268</sup> The affirmative assertion may be framed '[*p*] is the case' or '[Not-*p*] is not the case', and the negative assertion as the denial '[*p*] is not the case' or the affirmation '[Not-*p*] is the case'.

<sup>269</sup> This will be clear at 19a23ff., where the invalidity of the inference from logical to physical necessity will be shown. Therefore Ackrill (137) is wrong in thinking that it is debatable whether Aristotle anywhere makes clear the flaw in the above argument from truth to necessity.

claim still holds if the necessity is explained in terms of logical necessity, to the effect that if something is truly forecast to occur this necessarily implies its real occurrence, and, inversely, if some pragma will really be the case the statement forecasting it must be true. This simply follows, as I noted before, from the relation of truth to fact as it is established in the definition of 'true statement'. Clearly, the fact that one cannot decide at the time the forecast is uttered whether the forecast, or its opposite, is true is of no relevance to the determinist's argument, since the only thing that counts is the necessary relationship between what truly is the case and what is truly forecast to be the case. But this much is certain: it is impossible for both of them (when regarding the same time in the future) to be true at this same point in time, because, given the relation between fact and truth (and between non-fact and falsehood), you have to be aware that a fact cannot possibly be a non-fact. Once again, the 'being *either* true *or* false' issue in effect merely boils down to 'being mutually exclusive'.

So the general outcome of the previous paragraph (18a34ff.) is asseverated at 18b4ff., to provide a firm basis for the fatalistic thesis that nothing happens just "by chance or as chance has it". Notice once again that the author has those assertibles in mind that are *actually applied* to an ontic situation by someone who asserts or denies them:

*Ibid.* 9, 18b4-9: So it is necessary for the affirmation, or the negation (respectively), to be true. It follows that nothing either is or is happening, or will be or will not be, by chance or as chance has it, but everything of necessity and not as chance has it, since either **he who says** (ὁ φάς), or **he who denies** (ὁ ἀποφάς), respectively, **is saying** what is true. For otherwise it might equally well happen or not happen, since what is as chance has it is no more thus than not thus, nor will it be.

The fatalistic argument is further underscored by taking the past time of the assertions into consideration (18b9-16). It is significant how Aristotle presses the inferential relationship between '[x]'s being the case' and '[x]'s being truly forecast to be the case' in his presentation of this argument. If something-to-be-white is the case now — it is argued on behalf of the determinist — it was, in fact, true to say earlier that it would be white, and, consequently, it is always true to say this. By (tacitly) putting 'always true' and 'necessarily true' and 'necessarily being the case' (in the above-mentioned physical sense)

on a par,<sup>270</sup> the argument leads to the fatalistic thesis that everything happens of necessity and nothing by chance or as chance has it. One should advert, once again, to the repeated use of εἰπεῖν in the first premiss of the argument:<sup>271</sup>

*Ibid.* 9, 18b9-16: Again, if it is white now it was **true to say** earlier 'it will be white'; so that it was always **true to say** of anything that has happened 'it will be so'. But if it was always **true to say** 'it is so' or 'it will be so', it could not *not* be so or *not* be going to be so. But if something cannot *not* happen it is impossible for it *not* to happen; and if it is impossible for something *not* to happen it is necessary for it to happen. Everything that will be, therefore, happens necessarily. So nothing will come about as chance has it or by chance; for if by chance, not of necessity.

Finally, the argument takes a sophisticated turn. The previous line of argument might be explained by someone as proving only that it was always *not* true to say 'it will not happen', i.e. still allowing that neither the affirmative member of the contradictory pair nor the negative one should be true; and this outcome would seriously jeopardize the fatalistic thesis. This suggestion is discarded by pointing out that the 'both of them not true' position is not of much help to the opponents of the fatalistic thesis. Firstly, it is argued (18b18-20), to adhere to this position would infringe the Law of Excluded Middle (LEM), in virtue of which if one member of a contradictory pair is false, the other must be true: *tertium non datur*.<sup>272</sup> And, secondly, the adherent to this position overshoots himself by proving too much, owing to his assuming that the affirmative and the negative member of the contradictory pair should have the property

<sup>270</sup> Incidentally, the equation of 'always true' and 'necessarily true' is surely not alien to Aristotle's thought. Moreover, from the disputational point of view, these two coincide.

<sup>271</sup> Gaskin (1996, 51-4) is quite right in criticizing the distinction made by Weidemann (1994, 257 and 318f.) between 'weak' and 'strong' varieties of truth as unfortunate and unclear.

<sup>272</sup> For the role of this law (LEM) in Aristotle's system of two-valued logic see my section 7.9 in Vol. II. Ackrill, who (wrongly, I take it) thinks (137) that the suggestion is seeking to evade the inference from 'every affirmation and every negation is true or false' to 'of every contradictory pair either the affirmation or the negation is true', is right to deem this a straightforward instance of begging the question. To Weidemann, who rightly rejects Ackrill's *petitio principii* charge, it seems strange that Aristotle does not explicitly state that in the case of a pair of singular contradictories not both members can be false either; but why should Aristotle not tacitly assume LEM? Weidemann's own view (265) that the lines 18b18-20 do not contain a first argument against the 'both members false' suggestion of 18b17-18, but should be explained in the framework of the second argument of 18b20-25, is not convincing and needlessly complicates matters.

of being both not the case and *not* not the case as well. By making a comparison with something having two properties ('white and large') at the same time, it is argued that then either of them obtains and will obtain simultaneously.<sup>273</sup> For the 'either of them false' position, which comes down to assigning the inconsistent property of 'will both be and not be' to the same assertible, would mean that anything that is supposed by the anti-determinist opponent to happen by chance or as chance has it, as is the (putative) case with sea-battles, will both happen and not happen. And this result would nullify not only the fatalistic thesis, but the opposite anti-determinist's view as well.

One should well observe that there is a (tacit or only implicit) opposition between 'affirmation' (= 'unapplied affirmative assertible') and 'negation' (= 'unapplied negative assertible') on the one hand, and these expressions when uttered as being true on the other. This distinction is precisely what the adherent to the fatalistic argument ignores:

*Ibid.* 9, 18b17-25: Nor, however, can we say that neither is true, I mean that it neither will be nor will not be the case. For, firstly, <on this view> while the affirmation is false, the negation is not true, and the negation being false, the affirmation happens to be not true. Moreover, if it is **true to say** that something is both white and large, both have to hold of it; and if it is **true to say** that these properties will hold tomorrow, they will have to hold tomorrow. And <likewise> if there is a 'neither will obtain nor will not obtain tomorrow', then there is no 'as chance has it'. Take a sea-battle: it would *have* neither to happen nor not to happen.

Subsequently, the initial thesis forwarded at 18a34-35, that if every affirmation and negation is true or false it is necessary for every pragma (i.e. everything expressed by an assertible) either to be the case or not to be the case, is now repeated in the context of the 'always true' = 'necessarily true' issue. The same goes for the determinist's view that everything happens of necessity and never as chance has it, including the counter-intuitive consequences of that view, such as that any deliberation and worrying is useless, candidly supposing that if we do this, this will happen, while if we do not, it will not:

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<sup>273</sup> Weidemann (266), who seems to be somewhat bothered by the fact that the property of being both white and large does not concern a contradictory opposition, fails to see that this is pivotal to the force of the analogy. Minio-Paluello, reading (at 18b21) μέλαν ('black') instead of the well supported reading μέγα, suffered from the same misunderstanding.

*Ibid.* 9, 18b26-33: These and others like them are the absurdities that follow, given that it is necessary for every affirmation and negation, no matter if it is about universals spoken of universally or about singulars, that one of the opposites should be true and the other false — the absurdity in particular that nothing of what happens is as chance has it, but everything is and happens of necessity. So there would be no need to deliberate or to take trouble (thinking that if we do this, this will happen, but if we do not, it will not).

The previous observations are made more vivid, then, by pointing out that the requirement that the assertibles should be asserted can be weakened: the assertions may have been made in the remote past, or even be merely hypothetical, since the existence of an ontic situation does not depend upon its being truly affirmed or mistakenly denied. In any temporal or fictitious circumstances it obtains that what is truly said was always true and was to happen of necessity:

*Ibid.* 9, 18b33-19a1: For there is nothing to prevent someone's **having said** ten thousand years beforehand 'this will be the case', and another **having denied** it; so that whichever of the two was **true to say** then, will be the case of necessity. Nor, of course, does it make any difference whether any people actually **made the contradictory statements** or not. For clearly this is how things (τὰ πράγματα) are, even if there was not someone to **affirm** it and another to **deny** it. For it is not because of the **affirming or denying** that it will be or will not be the case, nor is it a question of <its **being said**> ten thousand years beforehand rather than any other time.

In the last sentence, Aristotle, once again on behalf of the putative determinist, takes — though wrongly, to his mind (but, as often, he proves himself very understanding towards his opponent in order to completely undermine the man's thesis) — the relationship of necessity existing between something's being truly forecast and its actually being the case in the outside world, to bear on any kind of physical necessity. The very core of his rejection of the fatalistic argument is precisely that the necessity involved here is of a different kind altogether. This necessity is the logical or semantic one, which arises from the definition of truth, and this entails the mutual implication between 'being truthfully forecast' and 'being actually the case in the future'.<sup>274</sup>

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<sup>274</sup> Pace Weidemann (260), Dorothea Frede (1970, 21, n. 12; 44, and 1985, 40, n. 18) is right in taking the necessity involved here to be for Aristotle a "relative semantische Notwendigkeit". This does not alter the fact that in the determinist's argument, on whose behalf Aristotle is arguing here, this *necessitas consequentiae* is mistaken for a *necessitas consequentis*. Otherwise Aristotle's rebuttal of the determinist's argument at 19a23-39 would be ineffective.



The final sentence of this paragraph sheds more light upon the two main failures of the fatalistic argument. It first turns a blind eye to the distinction between contradictory assertibles, on the one hand and actual assertions on the other. For the former the general rule of ‘*either true or false*’ (merely meaning ‘not susceptible of being true (or false) simultaneously’) is not yet frustrated by any compulsion to opt either for ‘true’ or for ‘false’, whereas for the latter this choice is compulsory. Again, the fatalist underestimates this decision problem surrounding the truth-value of assertions about contingent future events by overlooking the fact that if contradictory assertibles bear on *contingent* future states of affairs, the assignment of truth and falsehood to the assertions is bound to suffer from a similar contingency and uncertainty, so that the above mutual implication will be reduced to that between ‘being possibly said truthfully’ and ‘being possibly the case’.

In the concluding sentence of this section, the impact of the notion of ‘being truthfully forecast by someone’ upon the main line of the fatalistic argument comes clearly to the fore:

*Ibid.* 9, 19a1-6: Hence, if in the whole of time the state of things was such that one or the other state was **truthfully said** <to be the case>, it was always<sup>275</sup> necessary for *this* to happen, and for everything that actually happened always to be such that it should happen of necessity. For what anyone **has truly said** would be the case cannot *not* happen; and of what happens it was always **true to say** ‘it will be the case’.

### 3. 64 *The ‘either-true-or-false-of-necessity’ issue correctly understood*

In the last part of the chapter (19a7-b4), Aristotle proceeds to present the correct interpretation of the general thesis (put forward at 18a28-29) that, for every affirmation or negation, including the special domain of future singulars, it necessarily obtains that it is either true or false. First, he (19a7-22) rejects on empirical grounds the determinist’s thesis about contingent future singulars, which is based on an incorrect explanation of the general thesis (“every affirmation or negation<sup>276</sup> has a truth-value”), owing to which it is taken to mean ‘necessarily one actually *is* true, the other actually

<sup>275</sup> Supplying with Weidemann (91; 274) αἰ before ἀναγκαῖον at 19a2.

<sup>276</sup> Note the ambivalence of ‘affirmation’ and ‘negation’, meaning indiscriminately affirmative (negative) assertible and affirmative (negative) assertion; my section 2.21.

false');<sup>277</sup> next the author (19a23-39) presents the appropriate exegesis of the key notion of necessity on account of which he is able to show how the general thesis should be understood. Finally, the general conclusion is drawn (19a39-b4) that a distinction is to be made between the way in which the general thesis applies to things that are and how it bears on things that are not but could be or not be at any time in the future.

Aristotle's exposition of his own view about future singulars is expounded in section three of the present chapter (19a7-b4). This section clearly discusses three theses: (1) "Not everything happens of necessity" (19a7-22); (2) 'Being necessarily' should be distinguished from 'being of necessity' (19a23-27); (3). Once this distinction is applied to the modality of states of affairs (πράγματα), the fallacy embedded in the fatalistic argument breaks down (19a27-39).

The first thing Aristotle firmly establishes is the brute fact that future things have their origin both in deliberation and in preparatory action, and that, in general, in things that are not always actual, there is the possibility of their being or not being. This means, Aristotle claims, that both possibilities are open, that of being and not being, and, consequently, that of coming to be and not coming to be as well (19a7-11). Evidently the 'things' Aristotle is speaking of are possible states of affairs (πράγματα), not actual ones. Some of them even will never be realized,<sup>278</sup> such as some possible states of this cloak here — living frugally himself, Aristotle is presumably pointing at his own cloak, which he intends not to cut up but to wear to a thread; so there are possible states of which it is, anyhow, uncertain whether they will ever come into existence:

*Ibid.* 9, 19a12-19: Many things are obviously like this. For instance, it is possible for this cloak here to be cut up, and yet it will not be cut up but will wear out first. But its not being cut up is equally possible, for

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<sup>277</sup> I.e. in the sense in which the general thesis applies to present and past universals taken universally, and present and past singulars (see 18a29-31). Ackrill (141) thinks that "it is not quite accurate to say that [...] what Aristotle denies at the beginning he denies at the end. For what he denies at the beginning is that every affirmation is true or false, whereas what he denies at the end (19b1-2, cf. 18b29) is that of every affirmation and opposite negation one is true and one false". Ackrill seems to have overlooked that at the end of the chapter Aristotle rebuts not the general thesis of 18a28-29, but only the implementation it is given, in so far as assertions about present or past universals taken universally, or those about present or past singulars are concerned. It is this wrong implementation that was the starting-point for the fatalistic argument (18a34ff.).

<sup>278</sup> This parallels the fact that not every assertible corresponds to an actual assertion containing it. See my section 3.66.

it would not be the case that it wore out first unless its not being cut up were possible. So it is the same with all other developments that are spoken of in terms of this kind of possibility. So it is evident that not everything is or happens of necessity: some things happen as chance has it.

Now all such possible states,<sup>279</sup> which may, but need not come into existence in the near or remote future, are expressed by an affirmative assertible (e.g. 'this-cloak's-being-cut-up'), which, when opposed to its negative counterpart ('this-cloak's-not-being-cut-up'), makes up a pair of contradictories. With respect to either of these two the general rule holds that, should it be involved in an actual assertion (*saying* 'it will (not) be the case'), one will be true, the other false. The only problem surrounding such assertions is the decision problem,<sup>280</sup> since, unlike those concerning present and past states of affairs, there is or was no real state of affairs to check the truth and falsehood of assertions about future events with. So Aristotle concludes this paragraph by addressing the issue of the truth-value of assertions in which such contradictory assertibles are involved. In the case of things that happen as chance has it you may say, he claims (19a19-22), that of the affirmative and negative member of contradictory pairs bearing on their possible occurrences neither is true rather than the other. Concerning still other things it holds that one is true rather than the other, and this even as a rule, but, none the less, it remains possible for the other to happen instead. Putting it briefly, as far as contingent future singular states are concerned, nothing is certain. It is uncertain whether they will actually come into existence; nor is there any certainty about the truth-value of the contradictory assertions about them. The sole certainty is that *if* one is (**said to be**) true the other must (**be said to**) be false, because the '*either true or false*' device merely means that they are mutually exclusive.

This brings Aristotle to the general issue of the relationship between states of affairs (πράγματα) as expressed by unapplied assertibles and those referred to by them when they occur in actual

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<sup>279</sup> Necessary or impossible states of affairs, such as 'every-man-being-rational' or 'man-not-being-rational'— which, incidentally, as expressed by assertibles are mental entities too, whether or not applicable to reality — are not under discussion here, since they are not about singulars. It should be noticed, however, that to Aristotle, any singular assertible bearing on a future state of affairs is contingent, including 'this-man-being-rational-tomorrow', or 'the-future-man-being-a-rational-animal', because their subjects are contingent, corruptible things.

<sup>280</sup> My section 3.66.

assertions. The general idea behind the issue of fatalism was (18a34ff.) that the actual state of affairs determines the truth of the assertion about it, and that, retrospectively, the truth of the assertion prevents the possibility of the contradictory state of affairs from ever being the case. Therefore the actual state of affairs is in fact a necessary one. This line of argument forces us to discuss the notion of necessity.

### 3. 65 *On the notion of necessity*

The lines 19a23-39 are commonly deemed “an immensely difficult section” (Ackrill), since some parts of the text are considered to allow for alternative interpretations neither of which can be held straightforwardly.<sup>281</sup> In the following paragraphs Aristotle’s words will be explained in line with our previous discussions. The distinction between unapplied assertibles and assertibles actually asserted will once again turn out to be pivotal if we are to correctly understand what Aristotle intends to say.

In order to undermine the general idea supporting the determinist’s position that the actual state of affairs should determine the truth of the assertion, and that the assertion being true should imply its assertible’s expressing a necessary pragma, Aristotle goes on to examine the relationship between some state of affairs actually being the case and the truth or falsehood of the assertion about it. Once a state of affairs is actually the case, it is so necessarily, that is to say, it can of necessity no longer *not* be the case. But this does not mean, Aristotle argues, that the state of affairs as expressed by the corresponding assertible must as such be a necessary state of affairs, and cannot be a contingent one. Whoever puts these two things on a par, by ignoring this difference, *eo ipso* ignores the difference between ‘necessarily being’ and ‘being of necessity’:

*Ibid.* 9, 19a23-27: That what is, is, when it is, and what is not,<sup>282</sup> is not, when it is not, is necessary. But this does not mean that everything that is, is of necessity, or that everything that is not, of necessity is not.

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<sup>281</sup> It is extensively discussed in Ackrill (137-42) and Weidemann (279-99). Van Rijen (1989, 103-31) presents a thorough discussion of Aristotle’s views of “time and tense on the one hand, and the necessity of whatever is being discussed on the other” (103) as playing a central role in Aristotle’s discussion of the determinist’s problem. To my mind, the philosopher is most certainly concerned with these problems, but at this point they are not in the focus of Aristotle’s attention, nor do they need to be, because they do not pertain to the logical issue at hand.

<sup>282</sup> Reading at 19a23: καὶ (τὸ) τὸ μὴ ὄν.

For the expression 'everything that is, of necessity is when it is' is not the same as 'being of necessity in an unqualified sense'. Similarly with what is not.

Ackrill's accusation (133)<sup>283</sup> that Aristotle confuses the 'necessarily' which modifies a proposition and the 'necessarily' which marks the necessary connection between a protasis and an apodosis (or between premisses and conclusion) seems beside the point. As Ackrill himself recognizes, in his treatment of modal logic in *APr.*, Aristotle appears to be reasonably clear about this important and far-reaching distinction, which is commonly labelled as the '*necessitas consequentis* vs. *necessitas consequentiae*' distinction. Ackrill (139) also claims that Aristotle is "certainly operating here with a somewhat peculiar conception of necessity". This conception is brought forward, however, with all due clarity and, what is more, it is less peculiar than it might seem.<sup>284</sup>

Let me explain. To begin with, the necessity involved here is neither *necessitas consequentis*, which is the necessity of the state of affairs expressed by the consequens (apodosis), nor *necessitas consequentiae*, which is the inferential necessity occurring between antecedens (protasis) and consequens (apodosis).<sup>285</sup> Rather, the logico-semantic rule of 19a23-24 rests upon two cornerstones. The first is nothing but logico-semantic necessity following from the definition of 'true logos'; and the other is what may be called 'temporal or time-bound necessity', i.e. the unalterability of the brute fact that something has already come into existence at a certain time.

The logico-semantic necessity consists in the requirement that we should take our own definitions seriously. Once the truth of a statement has been defined as the state of affairs (pragma) expressed by its being the case,<sup>286</sup> you are forced to accept the logical equivalence between 'the statement being true' and 'its pragma's being the case', which is as stringent as that between '[x]'s being a man' and '[x]'s being a rational animal', once 'man' is defined as 'rational animal'. It is all due to our way of defining (real or metalinguistic) things, and has nothing to do with any mutual physical necessity, as is explicitly remarked by Aristotle on account of statemental truth and actual

<sup>283</sup> A similar charge is made by Patzig (1969, 21ff.).

<sup>284</sup> It is akin to Aristotle's favourite conception of what I will label 'disputational necessity' (my section 6.12).

<sup>285</sup> Cf. Weidemann, 280f.; Gaskin (1996), 54.

<sup>286</sup> *Cat.* 5, 4b8-10; 12, 14b14-22; cf. *Int.* 9, 19a33.

existence, for that matter.<sup>287</sup> The time-bound necessity, on the other hand, is nothing but ‘facticity’, or the adamantly being given of whatever has presented itself to us: once something (state of affairs) has come into actual existence at some time, its being or having been in existence cannot be undone.

Now the logico-semantic rule presented at 19a23-24 only applies these two necessities to assertions about present and past states of affairs: if their present or past πράγματα irrevocably obtain, then the assertions are irrevocably true, and *mutatis mutandis* the same applies to the πράγματα not obtaining and the assertions being false.

On this interpretation, the logico-semantic rule of 19a23-24 has nothing about it to make the paragraph 19a23-39 an ‘immensely difficult section’. The remainder will turn out to be reasonably manageable as well.

### 3. 66 *Taking the dichotomy ‘assertible’ vs. ‘assertion’ seriously*

Ackrill (137f.) has well observed that at first (19a23-32) Aristotle talks of things and events, and then (a32-39) draws the corresponding conclusions about assertions concerning these things and events. This dichotomy — which should be taken to be between assertions and assertibles referring to things and events — is of paramount importance indeed, and one should, with Ackrill, be aware that at 19a23-32 Aristotle is speaking of ‘things and events’ (in my terminology, ‘assertibles’), and not yet of assertions about them.<sup>288</sup> Now these ‘things and events’ are the πράγματα which are expressed by assertibles. What is claimed to be necessary (ἀνάγκη) is, significantly enough, expressed by an infinitival phrase (our *that*-clause), and thus stands for a state of affairs as conceived of. To think that Aristotle is talking about Reality as such (i.e. not as conceived of) would be unreasonable, and would compel us to assume that Aristotle accepts the idea of such clumsy things as negative states of affairs existing in the outside world, existing states, that is, which would possess the

<sup>287</sup> *Cat.* 12, 14b18-20.

<sup>288</sup> Ackrill thinks (*ibid.*) that the dichotomy is slightly blurred by Aristotle’s use of the term ‘contradictories’ within the first part (at a27), but seems to ignore the fact that, as often, this term stands for assertibles, not statements (assertions). The only thing Aristotle can be blamed for is that he does not explicitly say that to observe this dichotomy is pivotal to solving the problems surrounding the future singulars, while it is not, when it comes to present and past things and events, regardless of whether they are expressed by assertibles or assertions.

remarkable property of not being the case, and in that 'capacity' cause assertions to be true or false. Hence when saying "is necessary", the author must have logical (or disputational) necessity in mind. This implies that the relationship of necessity which is in order here is one existing between assertions: *if you truly say* 'p' (or 'Not-p') , 'p' is 'p' and nothing else, let alone 'Not-p'; and, *mutatis mutandis*, the same holds good for 'Not-p'. That is why the disjunction '*either true or false*' should always be understood in terms of statement-making, and, consequently, the corresponding rule is to be taken to mean 'if one of the contradictory members is *said to be* true, the other must be *said to be* false'.

Ackrill (141) is of the opinion that Aristotle holds a rather crude realistic correspondence theory of truth, and suggests that we might well expect him to think that if the state of affairs now is such that it is not yet settled whether the state of affairs [x] will or will not occur, then '[x] will occur' is not now either true or false, since there is not yet anything in the facts for it to correspond or fail to correspond with. Now whatever we may think of Aristotle's way of thinking about the truth of assertions, Aristotle never claims or even suggests that, in the given circumstances, the *assertion* '[x] will occur' should lack a truth-value — which, incidentally, would violate the general thesis of 18a28-29. What on his correspondence theory of truth, he has to claim is that, as long as the state of affairs [x] is such that it is not settled whether [x] will or will not occur, its truth-value cannot be settled either. As was remarked on before, the only problem surrounding assertions about (contingent) future events is the decision problem, viz. that of deciding at the time of the utterance which member of the contradictory pair is true, and which is false — or in Aristotle's words (19a29): to apportion (διελόντα) truth and logical necessity. To be more precise, when it comes to assertions about the present or the past, the question of *which* truth-value obtains, is, *in principle* at least, decidable; with those about contingent future events this question is *in principle* undecidable, and, accordingly, the intended apportionment is impossible.

At 19a27ff. the general rule bearing on all kinds of states of affairs (whether present or future) is applied to contradictory states of affairs. Clearly what is asserted (or forecast) to be the case or not the case concerns our applying conceived states of affairs to the outside world, not ontic situations taken by themselves. Aristotle's substituting for the cloak example the famous sea-battle which is to take place

to-morrow is most significant in this respect.<sup>289</sup> The concept of a future sea-battle obviously has no referent at all at the time of the utterance:

*Ibid.* 9, 19a27-32: Now, the same account obtains for members of a contradictory pair: for every one, then,<sup>290</sup> it necessarily holds that it either is, or is not <the case>, and either will, or will not, be <the case>. But one cannot take them apart and distributively say of one, or the other, that it is necessary. I mean, for example: it is necessary for there either to be or not to be a sea-battle tomorrow; but it is not necessary that there will be a sea-battle tomorrow, nor that there will be none, though it is necessary for one either to take place or not to take place.

The states of affairs expressed by the members of a contradictory pair, then — e.g. the assertibles (a) ‘there-being-a-sea-battle-tomorrow’ and (b) ‘there-not-being-a-sea-battle-tomorrow’ — neatly obey the general rule for contradictory states: that is to say, when taken by themselves, they logically exclude one another, period. Putting it otherwise, an unapplied assertible never has a truth-value: it can only acquire one if it is asserted or denied. However, as long as neither of these assertibles is actually asserted and, by the same token, applied to the outside world, there is as yet no truth claim, and, consequently, the ‘necessarily one being true, the other being false’ issue is premature and indeed entirely out of the question.

In the subsequent sentences (19a32-39), however, Aristotle proceeds to examine the situation in which such assertibles *are* involved in an actual assertion and, consequently, in producing a truth claim. He starts from his basic doctrine concerning truth and falsehood, saying that a statement is true according to how the state of affairs which it signifies is real, which, incidentally, implies that a statement is false according to how this state of affairs is not real.<sup>291</sup> Clearly, what we should understand by the state of affairs (πράγμα) is not the situation found in the outside world, but the one *conceived of* by the speaker talking about the outside world; and it is the latter that, as it happens, may turn out to apply, or not obtain; otherwise, one would be forced to crudely postulate, on Aristotle’s behalf, the existence of non-existents in order to explain the possibility of false statements.

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<sup>289</sup> For the use of ‘sea-battle’ standing for ‘some naval armies fighting together’ see my section 3.62.

<sup>290</sup> Weidemann (91; 289) rightly argues for inserting the particle δὲ to mark a transition, with (or without) inference (Liddell & Scott, s.v. III).

<sup>291</sup> Cf. *Cat.* 5, 4b8-10 and 12, 14b14-22.



From this basic viewpoint Aristotle infers that, speaking of future contingent states (19a34-36), if a definite (conceived) state of affairs is capable of being realized and not being realized as well (though not at the same time) as chance has it — or putting it briefly, when there is talk about future *contingent* states — the same holds for states and events expressed by contradictory *assertibles*; that is to say, their πράγματα too, may come, or not come, into existence as chance has it. So much for the assertibles taken by themselves, i.e. as long as no actual truth claim is made. The only decidable thing about them is that they are mutually exclusive, and so, *when* they are asserted, they cannot have the same truth-value.

It should be stressed time and again that unapplied assertibles have no truth-value at all. To be actually asserted (and so to turn into an applied assertible) is a *conditio sine qua non* for obtaining a truth-value. This should be put alongside Plato's insisting (*Sophist* 262C3-5 *juncto* D2-5) that no information is supplied about something's being, or not being the case, until someone has actually blended (κεράσῃ) the attribute with the names. Plato claims that "*the user* of a λόγος supplies information about things-that-are (or become, or were, or will be), and he does more than just name something: he really tells (περσίνει) something, by weaving together (συμπλέκων) the attributes with the names; that's why we say he is 'stating', not merely 'naming'." Evidently, Plato has the assertoric synthesis<sup>292</sup> of thoughts actually carried out by someone on the apophantic level, either in inward or outward dialogue, in mind.

Returning now to Aristotle's view of a pair of contradictory assertibles, when it comes to actually asserting such assertibles, a feature like the aforesaid one will obtain for the truth-value of the assertions made by the user of the assertibles. This means that the assertions about contradictory, i.e. mutually exclusive, things expressed by contradictory assertibles may also be true or false according to how chance has it. This being so, it is no longer a necessary state of affairs that controls both what is or is not and our assertions about it, but mere chance, as far, of course, as contingent states of affairs ('chance events') are concerned:

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<sup>292</sup> For this Aristotelian term see my section 2.3. Plato uses συμπλοκή; *Sophist* 259E6; 262C6; *Theaet.* 202B5. The opposite notion διαίρεσις is used by Plato only to stand for division and distinction, not for the denial of an apophantic συμπλοκή. For Plato's statement-making utterance (λόγος εἰρημένος; *Theaet.* 190A5) see De Rijk (1986), 306-16.

*Ibid.* 9, 19a32-39: So, since **assertions** are true according to how the state of affairs signified by their assertible is real,<sup>293</sup> it is clear that wherever these are such as to allow of contraries as chance has it, the same necessarily holds for the contradictories too. This happens with things that are not always so or are not always not so. With these it is necessary for one or the other of the contradictory members to be true or false — not, however, necessarily this one or necessarily that one, but this one *or* that one, as chance has it; or for one to be true, <or false>, *rather* than the other, but not *eo ipso* (ἤδη)<sup>294</sup> true, or false.

Ackrill (142) is surely right in noting that Aristotle certainly does not tell us (*expressis verbis*) that his solution to the problem of the assertions about contingent future events is that they may be *now* neither true nor false though they will necessarily acquire a truth-value at some time. However, he fails to see, I think, that, throughout the discussions from 19a23 onwards, it is not the determined truth-values of assertions *actually made* about contingent future events that Aristotle has in mind, but merely the decision problem — the problem, that is, of committing oneself to *asserting* them to be true or false.<sup>295</sup> Thus what is at stake is not the truth-value of such assertions, but our truth-claims, which are in principle unverifiable claims as long as the contingent future singular state of affairs is not an actual one. Therefore Aristotle cannot be supposed to say (nor tacitly think either) that such contradictory *assertions* are neither true nor false. On the contrary, in virtue of the principle of bivalence concerning all kinds of assertions (18a28-29), each of them may be said to be ‘*either* true *or* false’. But their actually being true, or actually being false, respectively, is not a decidable matter, just as the contingent states of

<sup>293</sup> I.e. turn out to apply to the outside world. Patzig (1981, 39), who is followed by Weidemann (1994, 292f.), regards 19a33 as a “not very happily worded formula”. Patzig mainly follows Ackrill’s rendering (“statements are true according to how the actual things are”) and renders: “die Sätze sind entsprechend wahr, wie es die Dinge sind”, while Weidemann (292) holds the word ἀληθές to be a “Prädikatsadjunkt” determining the word ἔχουσι (which should be supplied, in his view), and takes Aristotle to be saying that the statements about things qua being true are in the same position as the things are. They both failed to see that 19a33 only contains the harmless information that a λόγος is said to be true according to its content (πρᾶγμα) being the case. Cf. the description of false λόγος in *Met.* Δ 29, 24b26-25a1.

<sup>294</sup> For ἤδη = ‘*eo ipso*’ (‘by this very fact’ or ‘on account of *this*’, viz. its tending more toward truth (or falsehood) than the other). For ἤδη indicating logical proximity see Liddell & Scott, s.v.

<sup>295</sup> Whitaker, who takes (126f.) what he (wrongly) sees as the third violation of RCP to be of a different sort from the ones (supposedly) occurring in chapters 7 and 8, rightly argues (127f.) that the critical point in chapter 9 is the decision problem. Much light is shed by his putting (119-28) Aristotle’s solution to the main problem in the context of dialectical practice.

affairs expressed by their assertibles can only be said to be mutually exclusive, and equally realizable, or one just a bit more realizable than the other, though still unpredictable and happening or not happening as chance has it.

Whitaker aptly clarifies the context of Aristotle's solution to the decision problem by noting (127f.) that in the case of predictions no apportionment of truth to one or the other member of the pair of opposite assertions is possible. The contingency of the situation is reflected in the impossibility of assigning truth to one assertion and falsehood to the other (19a32-35). Because the choice cannot be made, the question is unanswerable. Obviously, this dialectical situation "matches exactly the way things are" (128).

Finally, the outcome of this chapter is concisely stated by Aristotle:

*Ibid.* 9, 19a39-b4: Clearly, then, it is not necessary that of every affirmation and negation concerning opposite states of affairs one should be true and the other false, since what holds for things that are does not hold for things that are not but may possibly be or not be; with the latter it is as we have said.

### 3. 67 *Summary of the argument of 19a7-b4*

The line of argument developed in the section 19a7-b4 may now be summarized.

(A) Speaking of statement-making in general, the following points can be articulated:

(1) When something is the case, or was the case, its being (having been) the case is an established fact, which must be asserted. Hence when it is actually asserted, the statement is (must be) true, and when it is denied — or (using a negative assertible) its not being, or not having been, the case is asserted — the statement, by definition, is (must be) false.

(2) The necessity ('must') here involved is not a physical, but a logical (or rather disputational) necessity and, as such, has nothing to do with the modality of what is expressed by the assertible of the statement. In point of fact, this 'must' depends on the speaker's attitude to the outside world and the claims about it he (or others) have agreed on.

(B) Turning now to statement-making utterances using mutually contradictory assertibles:

(3) For contradictory assertibles it holds that, prior to any statement-making, they are mutually exclusive; rather than actually having a

truth-value, they are only susceptible of having one. We should be aware that one and the same assertible (or 'dicibile') may equally be used to formulate a prayer, a wish, or a command, none of which by their nature have a truth-value.

(4) When the contradictory assertibles concerning present or past states of affairs are involved in statement-making utterances, the assertions, in principle, allow us to decide the question of whether they are true or false and, accordingly, to state them as being true or as being false.

(5) When the contradictory assertibles constituting the assertions are about future events, the modality of the assertible *is* of importance. There are two possibilities, then:

(5a) When the assertibles are about contingent states of affairs, i.e. those "that are not but may possibly be or not be" (19b3-4), the corresponding assertions being possibly true or not true, cannot as yet be decided to be true or to be false, in spite of the fact that, in keeping with the general rule governing the truth-value of contradictories, they must be *either* true *or* false. E.g. 'This cloak will be cut up next week', or 'There will be a sea-battle to-morrow'.

(5b) When the assertibles are about states of affairs that are not as yet but will be the case inescapably, one assertion can be decided to be true, the other false. E.g. 'Future men will be rational animals'.<sup>296</sup>

On this interpretation, four things are momentous.

First: It is of importance to distinguish between unapplied assertibles and fully-fledged assertions. The former are as yet devoid of any truth claim and so have nothing to do with actual truth-values; whereas assertions, by definition, possess a truth claim and, as they stand, *are* either true or false, though the truth-value of some of them, viz. those concerning contingent future events, is not decidable at the time of the utterance.

Second: The decision problem ('true?, or false?') does not enter into the domain of assertibles. For although assertibles are significative, when they are not as of now applied in an actual assertion, they are not assertive and, consequently, have no proper truth-value. As far as *contradictory* assertibles are concerned, they are mutually exclusive, that is all. This means that *if* you are going to assert either of them (whether the affirmative or the negative one), you must deny

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<sup>296</sup> Note that (5b) hardly plays a role in this context. Besides, one may doubt whether Aristotle has any notion of genuinely necessary *future* states of affairs, apart from those concerning the heavenly bodies, perhaps.

the other, period. But once you actually proceed to use the assertibles in statement-making, truth-values will be involved, and then the decision problem comes in, and the difference between assertible and assertion becomes pivotal.

Third: Though the difference between ‘assertible’ and ‘assertion’ is pivotal on this score, it does not play a significant part in the truth-value issue as far as assertibles and statements about present and past things and events (πράγματα) are concerned. For, in such cases, the truth-value of the *applied* assertible can be loosely transferred to the assertible as such.<sup>297</sup> However, of assertions about contingent future events the *unapplied* assertibles are not yet involved in the ‘true?, or false?’ decision and are still restricted to the ‘either true or false’ disjunction (or the ‘mutually exclusive’ verdict) — quite unlike the corresponding assertions, which qua assertive, force the speaker to commit himself to ‘yes, true’ or ‘no, not true’. But because in these cases the assertibles concern future contingent states with an unstable ontic condition, the ‘yes’ as well as the ‘no’ are bound to share in this instability.

Fourth: Aristotle can by no means be charged with the “notorious assertion that statements about the future are not subject to the law of excluded middle”.<sup>298</sup> Nowhere, neither in *Int.* nor elsewhere, is Aristotle in conflict “with the uncompromising spirit with which in *Met.* (Γ, chs. 7 and 8) he defends the uninhibited validity of the law against the attacks of Heraclitus and Protagoras”.<sup>299</sup> If any charges are to be made at all, they may be made against the interpreters of Aristotle who systematically ignore Aristotle’s vital distinction between assertibles and fully-fledged assertions as made by *a user* of assertibles.

### 3. 68 *Boethius’s exegesis of Aristotle’s solution*

The history of “the dramatic reading” (Kretzmann) of *Int.* ch. 9. is of particular interest in so far as Boethius’s exegesis of the Aristotelian solution to the determinist’s problem is concerned.<sup>300</sup> Among the

<sup>297</sup> This transferability has everything to do with the ambivalent meaning of κατάφασις and ἀπόφασις in Aristotle, as these expressions are both used to stand for affirmative (and negative, respectively) assertibles as well as for the corresponding assertions; my section 2.21.

<sup>298</sup> Patzig (1969), 24. Cf. Whitaker (1996, 109-31), who even claims that *Int.*, ch. 9 contains “the third exception” to this law (Whitaker’s RCP = ‘Rule of Contradictory Pairs; *ibid.*, 79).

<sup>299</sup> Patzig, *ibid.*

<sup>300</sup> One has to be aware that, owing to the Stoics, the problems surrounding the

almost countless interpretations and evaluations<sup>301</sup> of Aristotle's exposition of the problems surrounding statements about contingent future events, Boethius's exposition (in the wake of the Ancient commentators) has been very influential up to our day. Norman Kretzmann (1987, 70ff.) has provided us with a useful paraphrase of Boethius's solution (in *In Periherm.* I and II) to the problem concerning contingent future events as Aristotle saw it.

The core of the Boethian exegesis is the author's contradistinction (taken over from Ammonius<sup>302</sup> or some other Greek commentator)<sup>303</sup> between what is called 'indefinite truth and falsehood' and 'definite truth and falsehood'. Kretzmann (77) explains the distinction as follows: to say that one proposition is true and the other false *indefinitely* must mean that such propositions are *not yet* definitely true or definitely false but are as of now either-true-or-false in the sense that the properties 'true' and 'false' exhaust the possibilities of which one is to be realized for each such proposition.

Kretzmann (77ff.) thinks that the details of the Boethian position also depend on maintaining a distinction between truth (or falsehood) at a time and truth (or falsehood) for a time: "a proposition true at a time is *eo ipso* true for that time, but a proposition true for a time is not *eo ipso* true at that time". In addition he introduces (*ibid.*) the distinction between 'narrow' and 'broad bivalence': "Narrow bivalence: At any given time every proposition has exactly one of these two truth-values: true or false; Broad bivalence: For any given time every proposition has exactly one of these two truth-values: true or false; and so at any time at which it does not yet have one of those truth-values it has the disjunctive property either-true-or-false".

Kretzmann (78) considers broad bivalence to be the heart of Boethius's interpretation of Aristotle's intentions, and the only available basis on which he could support his claim to have preserved bivalence and rebutted the Stoics. However, Kretzmann continues (78-86), broad bivalence is not all there is to Boethius's position. The other component — "which seems to have been completely neglected and almost completely overlooked in the literature", he adds (79) — is the distinction Boethius makes between 'propositions' (in the

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fatalistic argument had developed into the fascinating problem of Determinism.

<sup>301</sup> Weidemann (300-24) presents an extensive survey of them up to 1994, and his own evaluation. His own comments on *Int.* 9 are found 223-99.

<sup>302</sup> See e.g. CAG IV-5, p. 139<sup>14</sup>ff.

<sup>303</sup> Kretzmann (1987), 67f.

modern sense; hence in the sense of ‘assertibles’) and ‘assertions’, including Boethius’s evaluation of assertion.<sup>304</sup> Kretzmann (86f.) is of the opinion, then, that the notions of ‘assertional truth’ and ‘broad bivalence’ are at the roots of Boethius’s solution to the problem concerning contingent future events, and Boethius’s interpretation of Aristotle’s position on this score. It is my opinion that the interpreters (Kretzmann among others)<sup>305</sup> who take the time factor into consideration without realizing that what is at issue here is merely the decision problem — and particularly Kretzmann, who introduces the distinction between ‘narrow’ and ‘broad bivalence’ — needlessly complicate, and even seem to confound the issue.

Both Kretzmann (*ibid.*) and Weidemann (299) are of the opinion that Aristotle’s solution to the ‘*either true or false*’ problem to some extent affects the law of bivalence; to speak with Weidemann, the law is valid in principle, but not uninhibited.<sup>306</sup> This judgement testifies to a serious misunderstanding, I am afraid. To Aristotle, the Law of Bivalence is valid in an unqualified way: “Every statement is *either true or false*, period”. But this does not mean that this law enables us to correctly decide *how* to distribute ‘true’ and ‘false’ over contradictory pairs of assertibles in the case in which they are actually asserted or denied. The only thing the law has to say about this distribution is that it forbids one to accord the same truth-value to both members of the pair. But the answer to the initial question *which* one of the *assertions* is true or *which one* is false (so that, on this law, the other is false or true, respectively) is not of the law’s concern.

A cognate misunderstanding concerns the status of the assertibles in contradistinction to assertions (including denials). In the case of unapplied assertibles, there is no decision problem at all, because the Law of Non-contradiction (LNC) merely states that they are mutually

<sup>304</sup> Kretzmann failed to see that Ackrill did notice this distinction, albeit without putting it into the right focus.

<sup>305</sup> E.g. Van Rijen (1989), 103-31; Weidemann, 281ff. and the authors discussed by Weidemann, *ibid.* See also the (philosophically and historically) interesting paper presented by Weidemann (1997), 431-40, and the defense of the Boethian position in Hafemann (1998), 257-61.

<sup>306</sup> Weidemann’s final judgement is worth quoting: “[...] man (könnte) die Antwort, die Ar. in diesem Kapitel auf die Frage gibt, ob das Bivalenzprinzip [...] auch für Aussagen über kontingent-zukünftige Ereignisse gilt, im Stil von Radio Eriwan (vgl. Dorothea Frede 1985: 43) auf die Formel bringen: ‘Im Prinzip ja, aber ...’. [...] Und insofern ist das Bivalenzprinzip [...] zwar nicht uneingeschränkt, aber doch prinzipiell gültig”. Some pertinent criticism of Weidemann’s interpretation of 18a28-34 is found in Gaskin (1996), 50f.

exclusive; whereas the Law of Bivalence (Law of Excluded Middle, LEM) states that, *if* they are going to be actually asserted or denied and thus become an assertion, then if one is true the other is false, and the other way round. However, in their capacity of mere 'assertibles', they are *neither* true *nor* false, and only susceptible of a truth-value by becoming part of an assertion or denial. Hence unapplied assertibles are not subjected to the principle of bivalence, neither to the narrow nor to the broad principle. This is not to say that they should restrict its validity: the law instead has no bearing on their domain at all, because truth and falsehood claims do not pertain until something is actually asserted or denied.<sup>307</sup>

All things considered, the distinction between mere assertible and fully-fledged assertion (denial), which is so manifest in Aristotle's anatomy of the statement-making utterance, is the necessary and sufficient basis for Aristotle's solution to the problem of the contingent future events in chapter 9, and likewise for the solution argued for by the Greek commentators and Boethius. In effect, both Aristotle and these commentators confine the logical question to a decision problem.

To this end, the latter all employ the device of 'definitely true' as opposed to 'indefinitely true' alone.<sup>308</sup> I confine myself to one clear passage in Boethius, in which he tries to defend Aristotle's position against the Stoic criticisms:

*In Periherm.* II, 208<sup>1-18</sup>. Now some people, among whom the Stoics, too thought that Aristotle claims that contingent propositions about the future are neither true nor false, [...], but falsely so. For Aristotle does not say that both (contradictory) pairs are neither true nor false. Instead he says that surely (*quidem*) each one of them is *either* true *or* false, not, however, definitely, as is the case with those concerning past matters or present matters. He holds instead that there is in a way a dual nature of statement-making expressions (*vocum*): some of them are, he holds (*essent*), not only such that 'true' and 'false' are found in them but also such that one of them is definitely true and the other definitely false; in those of the other type, however, one is

<sup>307</sup> Likewise, the fact that traffic rules applying to automobiles do not apply to pedestrians does not restrict their validity.

<sup>308</sup> Ammonius, CAG IV-5, pp. 130<sup>23-26</sup>; 131<sup>2-4</sup>; 138<sup>11-139</sup><sup>20</sup>; 141<sup>18-25</sup>; 143<sup>17-22</sup>; 144<sup>9-14</sup>; 145<sup>29-31</sup>; 147<sup>20-22</sup>; 148<sup>9-10</sup>; 149<sup>16-18</sup>; 150<sup>10-12</sup> (Kretzmann, *op. cit.*, 89, n. 26). Boethius, *In Periherm.* e.g. I, 106<sup>25-29</sup>; 109<sup>24-110</sup><sup>18</sup>; 111<sup>8-22</sup>; 118<sup>15-119</sup><sup>1</sup>; 126<sup>17-21</sup>; II, 200<sup>14-18</sup>; 206<sup>8-207</sup><sup>13</sup>; 208<sup>1-18</sup>; 210<sup>23-21</sup><sup>128</sup>; 213<sup>26-28</sup>; 228<sup>1-230</sup><sup>3</sup>; 245<sup>9-12</sup>. For (ps.)-Alexander of Aphrodisias, *De fato* see Kretzmann (1987), 67f. — Gaskin, who seems to have a blind eye to the opposition between 'unapplied assertible' and 'assertible applied in an actual assertion', none the less rightly appreciates (55f.) the line of defence followed by the Ancient commentators.



true, and the other false, but indefinitely and mutably, and this as a result of their own nature, not with respect to ignorance or knowledge on our part.<sup>309</sup>

This passage, which contains some precious hints at what is at the core of the solution to the problem under discussion, calls for some comments:

(1) No doubt, Boethius's talk of "the dual nature" of statement-making expressions bears on the distinction between 'assertion' and 'assertible', to which we have given extensive attention in our foregoing discussions.

(2) Although the distinction between 'definitely true' (ἀληθὲς ἀφωρισμένως) and 'indefinitely true' (ἀληθὲς ἀορίστως) is not found in *Int.* ch. 9, it is firmly rooted in Aristotle's thought. For instance, in his discussion in *Cat.* of possible intermediates between contraries, Aristotle uses the label ἀφωρισμένως with reference to one definite case of two possibilities, as opposed to just indicating the couple without making a choice, so that the result will be "as chance has it" (ὅποτερον ἔτυχεν; *Lat.* 'ad utrumlibet'):

*Cat.* 10, 12b32-13a3: Where there is something intermediate (viz. between the contraries) it is never necessary for one or the other to fall to everything; it is not necessary for everything to be white or black that is susceptible of them, or hot or cold, since nothing prevents something intermediate between these from being the case. Moreover, there was something intermediate in just those cases where it was not necessary for one or the other to fall to a thing susceptible of them, except for things to which the one belongs by nature, as being hot belongs to fire and being white to snow; for in these cases it is necessary for definitely one of the two (ἀφωρισμένως θάτερον) to belong, and not as chance has it; for it is not possible for fire to be cold or snow to be black. Thus it is not necessary for one or the other of contraries to fall to everything susceptible of them, but only to things to which the one falls by nature; and in these cases it must be

<sup>309</sup> "Putaverunt autem quidam, quorum Stoici quoque sunt, Aristotelem dicere in futuro contingentes nec veras esse nec falsas. [...] Sed falso. Non enim hoc Aristoteles dicit quod utraeque nec verae nec falsae sunt, sed quod una quidem ipsarum quaelibet aut vera aut falsa est, non tamen, quemadmodum in praeteritis, definite, nec quemadmodum in praesentibus. Sed enuntiativarum vocum duplicem quodammodo esse naturam. Quarum quaedam essent non modo in quibus verum et falsum inveniretur sed in quibus una etiam esset definite vera, falsa altera definite. In aliis vero una quidem vera, altera falsa, sed indefinite et commutabiliter, et hoc per suam naturam, non ad nostram ignorantiam atque notitiam". The parallel remarks on this score in Boethius are many. E.g. *In Periherm.* ed. Ia, pp. 106<sup>25</sup>-107<sup>16</sup>; 111<sup>22-25</sup>; 124<sup>21-23</sup>; 125<sup>16-22</sup>; 126<sup>17-21</sup>; ed. IIa, pp. 189<sup>5-18</sup>; 19<sup>12-10</sup>; 200<sup>14-18</sup>; 207<sup>12-13</sup>; 211<sup>26-28</sup>; 245<sup>9-12</sup>.

definitely the one (ἀφωρισμένως τὸ ἓν) and not as chance has it (ὁπότερον ἔτυχεν).<sup>310</sup>

While the 'utrumlibet' device is prominent in our chapter (18b6-31; 19a18-39), its counterpart ('definitely this one, not the other') is not brought up under the label ἀφωρισμένως; but it is beyond doubt that the Greek commentators and Boethius were on genuinely Aristotelian soil when they introduced this label into the discussion of the determinist's problem.<sup>311</sup> This is all the more plausible, because in *Cat.* the pair is used in a cognitional context to describe the definite way in which we are familiar with correlational things. It is clear from the definition of relational being, Aristotle argues,<sup>312</sup> that, if someone is familiar with something relational definitely (ὠρισμένως), he will also be definitely familiar with that in relation to which it is spoken of. This definite way is opposed to the indefinite one:

*Cat.* 7, 8b4-15: For example, if someone knows definitely (οἶδεν ἀφωρισμένως) of a certain 'this' that it is double he also, by the same token, knows definitely *what* it is double of; for if he does not know it to be double anything definite neither does he know whether it is double at all. Similarly, if he knows of a certain 'this' that it is more beautiful he must also, because of this, know definitely *what* it is more beautiful than. He is not to know indefinitely (οὐκ ὁρίστως δὲ εἴσεται) that this is more beautiful than something that is inferior; such knowing comes down to mere supposition, and is not knowledge (ἐπιστήμη), since he will no longer precisely know that it is more beautiful than something inferior, because it may so happen that there is nothing inferior to it. It is plain, therefore, that anyone who knows any relational being definitely must know definitely that too which it is spoken of as relational.

Clearly, the opposition 'definitely-indefinitely' (certain, true, etc.) is quite familiar to Aristotle. To know something particular definitely entails that you can identify it as this [*x*], or that [*y*] etc., and that your knowledge is not restricted to knowing that it is 'either this or that, or etc'.<sup>313</sup> In a similar vein, to declare something 'definitely true' means in effect to state that *this* definitely or precisely is the case, while the opposite (genuine) possibility is actually not the case. This is precisely what happens whenever assertions are made, whereas in the case of mere assertibles the vague 'utrumlibet' is all there is. The case of the non-contingent future events is also nicely paralleled by

<sup>310</sup> Cf. *Cat.* 10, 13a3-15.

<sup>311</sup> Kretzmann (1987), 89f.

<sup>312</sup> *Cat.* 7, 8a35-b15.

<sup>313</sup> See also my section 4.65.

the *Cat.* passage where Aristotle makes an exception for cases in which one of the (theoretical) possibilities holds by nature so as to exclude the other, as well as by the one in which he deals with the definite way of knowing concerning correlational things.

(3) In the concluding sentence Boethius alludes to the decision problem. As for past and present events ('states of affairs'), decision-making (i.e. the choice between 'true' and 'false') depends on knowledge and ignorance on our part; but when it comes to a contingent future event there is no knowledge on our part, and no ignorance either.<sup>314</sup> Instead it is because of the unstable nature of the contingent things that we know for sure that no decision can be made.

### 3. 69 *Two final remarks on the 'assertion vs. assertible' device*

That people should fail to recognize the decisive impact of the distinction between unapplied assertibles and assertions actually made is, I think, largely due to their persistent identification of Aristotle's statement-making utterance with the common (in fact, Ammonian) 'S is P' copula construal, in which the difference between 'assertion' and 'assertible' is unhappily obscured. In Aristotle's deep structure analysis of the statement-making utterance, instead, the assertible '[ $(x \& f)$ 's be-ing]' is well set apart from the assertion it is the significative part of: 'Is: [ $x \& f$ ]'s be-ing]', since, unlike the indistinct<sup>315</sup> copulative 'is', the hyparctic operator is unequivocally assertoric.

The use of the label 'dictum' instead of 'assertible' could have added to the confusion, because the perfect participle 'dictum' is usually taken to stand for the content of a statement that was actually made at some time, rather than, as it should be, for that which *can* be asserted or denied. On the former view, any dictum seems to imply the (past or present) existence of an actual assertion it is part of; and what is worse, assertion and assertible seem completely interchangeable, both referentially and formally.<sup>316</sup> On the other hand, the use of the word 'assertible' is neutral as regards the question whether or not

<sup>314</sup> Like Greek ἄγνοια, 'ignorantia' must often be taken *in malam partem* as a culpable (or at least, needless) lack of knowledge.

<sup>315</sup> Nothing of the common notation with the copula guarantees whether the statement is assertoric or non-assertoric as in 'The tree is green' written down on the blackboard. Clearly, the unassertoric sentence equals Aristotle's 'assertible'.

<sup>316</sup> The result is that modern commentators have no scruples about replacing Aristotle's samples of infinitival constructions and *that*-clauses with indicative sentences, even when this is bound to cause difficulties.

there exists (existed) an actual assertion. The Medieval logicians from the second half of the 12th century onwards were wise enough to speak of 'enuntiabile', not 'enuntiatum', thereby strictly opposing the enuntiabile to the enunciation.<sup>317</sup>

### 3. 7 *Simple statements and their mutual relations*

Chapter ten deals with the diverse forms of what is regarded as a 'simple statement' and the logical relations holding between them. In my view, both the Greek and Latin, as well as the modern commentators have failed to bring to light the whole of Aristotle's intentions, in particular in so far as the structure of his statement-making utterance is concerned.

In order to be able to make sense of the doctrinal content of this difficult and at times rather obscure chapter, it is crucial to first understand how it is structured. Unfortunately, however, it is quite difficult to do this. First of all, I believe that there is an omission in the extant text as a result of haplography. Again, we should carefully exploit any hint to the peculiar manner of expression by which Aristotle tries to articulate his uncommon view of the 'deep structure' of the statement-making utterance. Finally, there are the seemingly corrupted lines at 19b20-21.

After an important introductory remark (19b5-14) on the proper object of this chapter, 'simple statement', the chapter divides into three main sections, the first of which (19b14-19) briefly deals with what is called 'affirmation and denial in their primitive forms' (19b15: 'first affirmation and negation') — those assertions, that is, in which the verb 'is' is used with a simple name or infinite name. The two remaining sections are all about their counterparts, viz. the assertions that have 'is' as "a third element additionally attributed" (19b19). The second of these sections (19b19-20a15) lists and discusses the two main "ways of expressing opposition" (19b20: ἀντιθέσεις); while section three (20a16-b12) deals with the logical relations of

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<sup>317</sup> E.g. the thoroughgoing treatise on the whole domain of logic going under the (modern) name *Ars Meliduna* (c. 1170; partial edition of the tract *De enuntiabilibus* in De Rijk, 1967 I, 357-90). "Nam enuntiabile dici non ab actu sed ab aptitudine superiora docuerunt" (p. 362). — Sorabji's solution to the problem (1979, ch. 5), I take it, goes in the same direction, but, forced by his adherence to the common view of the 'S is P' construal, he speaks of 'tenseless statement' instead of 'unapplied assertible'.

(contrary and contradictory) opposition and equivalence between assertions. It includes two important appended remarks, one on the non-apophantic nature of infinite ὀνόματα and ῥήματα (20a31-36), another on the word order within the assertible, to the effect that the transposition of the name and the attributive part of an assertible is semantically insignificant, since it does not affect the meaning of the assertion (20b1-12).<sup>318</sup>

### 3. 71 'Simple statement' defined

The introductory remark determines 'simple statement' by defining simple affirmation, leaving it up to us to apply this description to negation, and then goes on to establish the nature of its main components, ὄνομα and ῥήμα. Notice that in this context ῥήμα is to be taken as the component which contains the assertoric operator, so that the rendering 'verb' suits the context well:

*Int.* 10, 19b5-14: Now an affirmation signifies something about something — this last being <designated by> a name or a 'non-name'<sup>319</sup> — and what is affirmed must be *one* thing about *one* thing. Names and 'non-names' have already been discussed: I do not call 'not-man' a name but an infinite name (for what it signifies is in a way one thing, but infinite), just as I do not call \*'not-thrives' a verb. So every affirmation will contain either a name *plus* a verb or an infinite name *plus* a verb. Without something assigned <to what is designated by the name or the infinite name> there will be no affirmation, and no negation either <for that matter>. According to what we have laid down [16b6], 'is', 'will be', 'was', 'becomes', and the like are rhemata, since they additionally signify time.

This introduction clearly lays down what the author is going to talk about, viz. affirmative or negative assertions about some one thing. By the phrase 'some one thing' (ἐν τι; cf. 17a13) something is meant that is presented as ontologically homogeneous or an 'ontic unity'. Here Aristotle is referring back to what he labelled earlier "statement-making sentences revealing something about something *one*", regardless of whether this, say, man, is named by a more-than-one-word

<sup>318</sup> Ackrill (142f.) and Weidemann (327) give a different division of the chapter. Notice that Weidemann seems to take the purport of this chapter to be rather unspecific (325: "Das von Ar. unter verschiedenen Gesichtspunkten erörterte Thema dieses Kapitels sind einfache Aussage- und Behauptungssätze").

<sup>319</sup> Ackrill's rendering of τὸ ἀνώνυμον ('that of which we have no name at our disposal'). As is clear from the subsequent lines, Aristotle alludes to what he has said at 16a29-32 about indefinite names.

expression, such as the phrase ‘two-footed land animal’.<sup>320</sup> The criterion for being something one ontologically is to consist of component things which make up some one thing designated by an expression from the category of substance.<sup>321</sup>

The short digression on infinite names contains an interesting remark about the special way in which they bring up their significates. The infinite name is said (19b9) “to signify something that in a way is some one thing, but infinite (ᾠρίστον)”. As we have seen before (to 16a29-32), unlike ordinary names, the infinite ones signify a vague infinite connotatum, and so may be used to denote a rich variety of objects. But this does not prevent them from having a determined denotatum, if they are actually used, such as in ‘this not-man’ said of a particular tree or stone. Just as indefinite assertions *may* concern definite things and events (though they are brought up without universal or partial quantification), likewise infinite names and verbs can be, and for the most part are, used to stand for definite things; in both cases the only thing indefinite and vague is the information that names convey, rather than the mode of being of the things spoken of.

It is apparent from the context that Aristotle is not talking about assertibles taken by themselves, but statement-making utterances (‘assertions’), which he earlier (17a8ff.) called apophantic (λόγοι ἀποφαντικοί). Consequently, the rhemata instanced at 19b3 are apophantic tools, not just attributive expressions, so that the rendering ‘verb’ is quite appropriate. The verbs instanced here, ‘is’, ‘will be’ etc. are assertoric operators without a connotative value of their own, as was already explicitly stated by Aristotle in chapter three (16b22-25), where the verb ‘be’ was denied any meaning of its own. In fact, this (so-called substantive) verb is only entitled to the label ῥῆμα in so far as it shares one of the three conditions for being a verb with common verbs (adjectival verbs like ‘thrive’, ‘walk’, and so on), viz. time connotation. However, since it has no meaning of its own, it yields the time connotation to the things it is attached to, e.g. in ‘Is (was, will be): [(man&just)’s be-ing]’, while in the finite forms of the adjectival verbs — which may be analysed into ‘is’, ‘was’, ‘will be’, ‘becomes’ etc. — the time-connotation is subjoined to the semantic value of the onoma they comprise, such as ὑγίεια (‘health’) in ὑγιαίνει (‘thrives’).

<sup>320</sup> See *Int.* 5, 17a13-17.

<sup>321</sup> Cf. below to ch. 11, 20b12ff.

3. 72 *On primitive affirmation and negation*

The first main section (19b14-19) presents a brief discussion of assertions containing the assertoric (affirmative or negative) operator ranging over a single name, which is used either universally or indefinitely.<sup>322</sup> Aristotle clarifies his intentions by presenting some instances of both possibilities; I use my own notation to represent Aristotle's protocol language:<sup>323</sup>

*Ibid.* 10, 19b14-19: So an affirmation and negation in their primitive shapes<sup>324</sup> are: 'Is: [(man)'s be-ing]', 'Is not: [(man)'s be-ing]'; then, 'Is: [(not-man)'s be-ing]', 'Is not: [(not-man)'s be-ing]'. And again, 'Is in every instance: [(man)'s be-ing]', 'Is in every instance: [(man)'s be-ing]'; 'Is in every instance: [(not-man)'s be-ing]', 'Is in every instance: [(not-man)'s be-ing]'. For times other than the present the same account holds.

There is some dispute about the examples representing the assertion which contains the name used universally. Weidemann (17; 327; 334) takes the negatives as *O* sentences ('Nicht jeder Mensch existiert', 'Nicht jeder Nicht-Mensch existiert'), while for Ackrill they are *E* sentences ('every man is not', 'every not-man is not').<sup>325</sup> Weidemann is of the opinion that from 19b15 it appears that the opposition between the affirmations and the negations are meant by Aristotle to be contradictory, not contrary. However, the only thing Aristotle has in mind, it seems, is to present affirmations together with their negative counterparts, leaving the nature of the opposition (whether contrary or contradictory) as yet undecided. Therefore it is better to choose a more appropriate rendering and notation, one that retains this ambivalence.<sup>326</sup> In point of fact, what is denied is the dictum 'that every (not-)man is', and this denial has two truth conditions, viz. 'that not every ... etc.' or 'that every not-... etc.'

<sup>322</sup> Just as universal or partial sentences may contain infinite names or verbs as well as ordinary ones, so indefinite sentences admit of both.

<sup>323</sup> In traditional logic the examples run 'A man is', 'A man is not', 'A not-man is', 'A not-man is not' etc., in which the 'is' is said to be predicated as 'secundum (or secundo) adiacens'.

<sup>324</sup> My rendering of the adjective πρώτης; see my *Index* s.v.

<sup>325</sup> Weidemann (334) mentions eight translators having the *E* sentences against six presenting the *O* sentences.

<sup>326</sup> In the old translation published by H. Bender about 1870 in Stuttgart the ambivalent expression found in Aristotle is rightly preserved (p. 61, line 63). Zimmermann (1981: 123, n. 5, and 127, n. 1) has well observed the ambivalence of Aristotle's way of expressing himself, but by putting ambivalence and ambiguity on a par, he is wrong to hold it against him.

3. 73 *On 'Is' acting as a 'third element'*

The second main section (19b19-20a15) deals with assertions in which the substantive verb 'is' (or the 'is' included in any adjectival verb) acts as 'a third element'.<sup>327</sup> This section consists of two parts, in the first of which (19b19-20a3) Aristotle proceeds to deal with assertions that contain the operator ('is' or 'is not') ranging over a name *plus* attribute; just as in the assertions mentioned in the previous paragraph, the name may be used either indefinitely or universally. In the second part (20a3-15), the assertions are discussed in which the attribute is not an adjective but an adjectival verb.

Aristotle's claim that in the assertions under discussion in this paragraph the 'is' is "said additionally as a third element" (19b19-20: τρίτον προσκατηγορηθῆ), is phrased (19b20-22) in a way that triggered eager debates. In all our manuscripts and the Greek Commentators' lemmata as well we read the remark by which Aristotle intends to explain his example ἔστι δίκαιος ἄνθρωπος thus: τὸ ἔστι τρίτον φημὶ συγκεῖσθαι ὄνομα ἢ ῥῆμα ἐν τῇ καταφάσει, which is rendered by Ackrill "here I say that the 'is' is a third component — whether name or verb — in the affirmation".

On this understanding, this sentence raises a number of difficulties. For one thing, it is arduous to ascertain what it should mean. The function of φημί is unclear in the first place, since it does not introduce, as it does usually, an example or a terminological determination, and in light of the preceding λέγω δὲ οἶον (19b20) it even appears pleonastic.<sup>328</sup> Moreover, it should at least arouse our suspicion in that, when taken qua third component, the 'is' is surprisingly called "a name or verb".<sup>329</sup> What should we understand by the *name* 'is', given that in Aristotle's view, 'be' is not significative at all, and only co-significative in combination with names and attributes or adjectival verbs, while any name *is* significative by definition? (See ch. 3, 16b6-11 *juncto* 16b22-25).<sup>330</sup> Even the assumption that ἔστι could be called ὄνομα, because any verb taken by itself is an onoma (16b19-

<sup>327</sup> Traditional logic speaks of 'is' used as 'tertium (tertio) adiacens'.

<sup>328</sup> Rapp (1991), 125f.

<sup>329</sup> It is true, Stephanus supports (XVIII-3, p. 43<sup>24+25</sup>) this rendering: ὄνομα δὲ ἢ ῥῆμα εἶπεν νῦν οἶον ᾧ βούλην ὀνόματι καλέσης αὐτό'.

<sup>330</sup> For this reason, Whitaker's assumption (56, n. 45; cf. 138) that "in this passage Aristotle seems to doubt whether the copula should be called a verb, and therefore names it 'name or verb'" is baffling. Gaskin, (1996, 57) who defends the MSS reading ("the copula is a third thing, name or rather verb"), too easily glosses away over this difficulty. Also Weidemann, *ad loc.*



20) will lead us nowhere; for in its capacity of third element ἔστι is precisely taken as 'non-significative by itself' (16b23-24).<sup>331</sup> Weidemann (335-8) is right in taking the problem quite seriously.

Yet another difficulty might be raised against the use of συγκεῖσθαι in the sense of 'to be a component'. The verb συντιθέναι usually occurs with two object accusatives (τὸ A καὶ τὸ B, meaning: 'A and B'), not with an object accusative followed by a dative (τὸ A τῷ B: 'A with B'). Accordingly, the perfect form συγκεῖσθαι usually applies to a thing as composed of at least two components, and is not said of just one component.<sup>332</sup> I know of only one instance of the dative construction, but it is significant enough to support the rendering 'to be a component' at *Int.* 19b21. When he discusses (Plato, *Sophist* 262E5ff.) the special character of λόγος ('statement'), the Eleatic Stranger proposes (263E12-13) to Theaetetus to frame a statement "by combining a thing with an action or state by means of a name and an attribute" (Λέξω τοίνυν σοι λόγον συνθεὶς πρᾶγμα πράξει δι' ὀνόματος καὶ ῥημάτων).<sup>333</sup> Along this line of thought we can imagine the pragma to be called συγκεείμενον, and in its wake the onoma referring to it, to be seen as a 'component'. As a matter of fact, after suggesting that συγκεῖσθαι is used in the sense of προσκεῖσθαι, the Greek commentator Stephanus proposes as a reasonable alternative to take συγκεῖσθαι here in the sense of 'being combined with' the other elements, namely the substrate and the attribute.

Christof Rapp (1991, 127f.) has proposed to read the text, as it is handed down to us, in quite a different way, and takes the phrase τὸ ἔστι τρίτον itself as the explicandum, and Aristotle to elucidate this expression by pointing out that in the affirmation the onoma or the rhema is composite so that a statement like 'A man is just' still has a

<sup>331</sup> Rapp (1991), 126f. Both Ammonius (CAG IV-5, p. 166) and Stephanus (CAG XVIII-3, p. 43) explain the phrase ὄνομα ἢ ῥῆμα by saying that Aristotle means that you may characterize ἔστιν in whichever way you please, either by calling it ὄνομα in so far as it stands for any meaningful expression, or ῥῆμα in that it contains time-connotation. Nuchelmans (1992, 9) rightly rejects any reference to 16b19-20 in support of their view because at 19b21-22 'is' is meant qua component of an affirmation.

<sup>332</sup> Stephanus is not happy with Aristotle's use of the verb (οὐ καλῶς λέγει), since one cannot say that ἔστιν is composed of two or more parts. CAG XVIII-3, p. 43<sup>19-21</sup>: ἰστέον ὅτι τὸ συγκεῖσθαι οὐ καλῶς εἶπεν· οὐ γὰρ σύγκειται ἐκ δύο τινῶν ἢ πλειόνων τὸ ἔστι· πᾶν γὰρ συγκεείμενον τοῦλάχιστον ἐκ δύο τινῶν σύγκειται. σὺ οὖν λαβὲ τὸ συγκεῖσθαι ἢ ἀντὶ τοῦ προσκεῖσθαι, ὅπερ αὐτὸς μικρὸν ὕστερον τῷ συγκεῖσθαι ἐπήγαγεν, ἢ 'συγκεῖσθαι' ἀντὶ τοῦ 'σὺν τοῖς ἄλλοις κεῖσθαι', οἷον σὺν τῷ κατηγορουμένῳ καὶ ὑποκειμένῳ. Cf. p. 39<sup>34-35</sup>.

<sup>333</sup> For the context see De Rijck (1986), 202-6.

binary structure. Accordingly, Rapp renders (127) 19b21-22: 'By "is as a third element" I mean that in the affirmation the name or the verb is composed'.<sup>334</sup> Nuchelmans (1992, 9) rightly objects to Rapp's translation that it would certainly require definite articles in front of ὄνομα and ῥῆμα.<sup>335</sup>

Nuchelmans too wishes to retain the MSS reading, but rejects both the traditional interpretation and Rapp's proposal. He submits (9) the following hypothesis. In calling 'is' a third element, Aristotle may have felt that he owed his audience an explanation as to what kinds of item are counted. That this is a point of some importance appears from the fact that, e.g. in 'Every man is', the 'is' is not counted as a third element. In this light it is understandable that Aristotle should think it to be useful to make clear that only names and attributes are counted as items one and two. To Nuchelmans, somewhat expanded, the sentence in question may be rendered: 'As to "is", I say that it is a third component in the affirmation on the understanding that a component is either a name or a verb'. I am afraid the expansion cannot be supported by the text as it stands, in which not *a* or any component, but *the third* component is called name or verb.

Weidemann goes quite a different way, and proposes (337) to read two datives, ὀνόμα(τι) and ῥῆμα(τι), to be construed with the verb συγκεῖσθαι, and to take the particle ἥ not disjunctively, but correctively. On this reading, what Aristotle means to say is that as a third element, "the 'is' is combined with the name, *or rather* with the verb".<sup>336</sup> Commenting upon the use of ἥ in the phrase ὀνόμα(τι) ἥ

<sup>334</sup> 'Mit "ist als drittes" meine ich: dass das Nennwort oder das Verb im Zusprechen zusammengesetzt ist'.

<sup>335</sup> However, his misgiving about Rapp's taking the phrase τὸ ἔστι τρίτον autonomously is not convincing, since to supply a τὸ is well defensible; cf. 16b23, where most commentators take τὸ ὅν to mean 'the expression "that which is"'.  
<sup>336</sup> Also Gaskin (1996), 57. Weidemann refers to the old German translation (1876) by J.H. von Kirchmann, who tacitly renders two datives (I, 67). Siger of Courtrai (Zeger van Kortrijk or Suger de Curtraco, active in the first quarter of 14th. cent.) comments (*In II Periherm.* 108<sup>93-95</sup>, ed. Verhaak) upon our passage: "Et exponit sc, dicens *Dico autem*, idest assertibile meum expono, sic dicendo 'est iustus homo', *est*, hoc est hoc verbum 'est', suppleas 'dicitur', *adiacere tertium in affirmatione ad nomen vel verbum*". This might suggest that in this paragraph of his commentary, Siger should have used a Latin rendering of 19b21-22, running "Dico autem 'est' adiacere [!], did his Greek exemplar read προσκεῖσθαι?] tertium in affirmatione ad nomen vel verbum". In the subsequent lines (108<sup>96</sup>-109<sup>4</sup>), however, Siger explains how the view that "hoc verbum 'est' praedicatur tertium adiacere (sic!)" should be understood. Nuchelmans, (1992, 8-28) who extensively discusses the vicissitudes of the 'est secundo and tertio adiacens' distinction, rightly (24) deems Siger's account rather confused.

ῥήμα(τι), Weidemann (337) rightly rejects Kirchmann's view that Aristotle rather carelessly uses this particle in lieu of καί ('and') as too facile. Instead Weidemann at first suggests (*ibid.*) that one could reasonably associate the disjunction with the opposition made by Aristotle between (what Weidemann calls) the "copulative use" of the word 'is' in ἔστι δίκαιος ἄνθρωπος (19b20-21) and the "existential use" in ἔστιν ἄνθρωπος (19b15); but afterwards (337-8) he argues for taking it in its corrective sense ('or rather'). So he takes Aristotle to mean that unlike the "existential" 'is', which acts as a second element of the assertion, the "copulative" 'is' is added as a third element to the name, or rather the rhema, to form the predicate with it.<sup>337</sup>

Weidemann's conjecture raises several questions. First of all, the absence of the definite article in front of the words ὀνόμα(τι) and ῥήμα(τι) cannot be explained by Weidemann's reference (337) to Greek grammar. It is true, when concrete objects in general are meant definite articles are often omitted.<sup>338</sup> However, this by no means applies to our case. Quite to the contrary. If 'things in question' or 'the appropriate things' or 'things involved' are meant, Greek by preference uses the definite article.<sup>339</sup> Therefore you have to conjecture <τῷ> ὀνόμα(τι) ἢ <τῷ> ῥήμα(τι). Another, still more telling problem is that from the paleographical point of view it is hard to imagine how the supposed original reading τῷ ὀνόματι ἢ τῷ ῥήματι could ever be simplified into ὄνομα ἢ ῥήμα, the more so as the reading of the two datives is strongly supported by the preceding συγκεῖσθαι, which in this context requires a dative construction.

The MSS reading, on the other hand, is untenable, since to call the empty container ἔστιν an onoma and thus ascribe a signification to it flatly contradicts Aristotelian metaphysical doctrine (as opposed to Plato's view of 'Be' as the 'plenitudo formarum'), and in particular what is claimed by our author in this very context (at 16b23-25).

How can we make the best of the text as it stands? I think some things can be considered reasonably certain. First of all, the Greek

<sup>337</sup> "Das kopulativ gebrauchte "ist", will Ar. sagen, ist als drittes (und nicht, wie das als Existenzverb gebrauchte "ist", als zweites) Element des Satzes dem Nennwort hinzugefügt, oder vielmehr dem Aussagewort, in Verbindung mit dem es — besser gesagt: das in Verbindung mit ihm — das Prädikat des Satzes bildet" (338).

<sup>338</sup> Kühner-Gerth II, 606, n. 4; for Aristotle see Bonitz, *Index*, 109b36f. ("Articulus, ubi genus aliquod universum significatur, non raro omittitur"), e.g. in the famous adage at *Pol.* I 2, 1253a2-3: ἄνθρωπος φύσει πολιτικὸν ζῷον ("Man is by nature a political animal").

<sup>339</sup> Kühner-Gerth I, 593; Verdenius (1981), 351.

text as handed down seems corrupt. Second, to take (with Stephanus) the verb συγκεῖσθαι to be used here for προσκεῖσθαι found elsewhere will be of no help in explaining the two nominatives. Third, the doctrinal objection against the common interpretation based on retaining the two nominatives is so overwhelmingly strong that an interference in the text seems inescapable, given that the proposals made by Rapp and Nuchelmans are not really satisfactory either. Fourth, in all proposed interpretations two things are assumed, and rightly so, I think: viz. (a) the verb συγκεῖσθαι has the unusual sense of ‘to be combined with’, not the usual one ‘to be composed of’; and (b) Aristotle is explaining what is meant by ‘a third thing’ (τρίτον).

Now given that the ἔστιν is said to be as a *third* element ‘combined with’ (or to be ‘something combined with’ = ‘a component’), we may reasonably ask what the other two components are. No doubt, onoma and rhema are meant, as was already suggested by Stephanus. But instead of following him in mentally supplying ‘substrate’ and ‘attribute’, it is better to *find* them in the text and read (with Weidemann) two datives satisfying the ‘with’ requirement. However, why onoma *or* rhema, you may ask, since one of them alone does not make three when joined to ‘is’? Hence the particle ἢ (‘or’) should be paid due attention to. As we saw before, Kirchmann’s view that Aristotle carelessly uses ‘or’ instead of ‘and’ will not do, and Weidemann’s taking the particle in its corrective sense (‘or rather’) cannot satisfactorily be explained. On taking the particle ‘or’ quite seriously, Aristotle not only tells us that ἔστιν is the third component of the statement-making utterance, but also intends to inform us about the way in which the third component is combined with *either* the onoma *or* rhema part of the assertible.

### 3. 74 *The key-role of the disjunction made between onoma and rhema at 19b21-22*

To my mind, the disjunction conveyed by the particle ἢ is really substantial, but should not be associated — as is done by Weidemann — with any opposition between the “existential” assertion type dealt with in 19b14-19 and the putative “copulative” one of 19b19ff. It is rather concerned with the assertions containing a ‘name *plus* attribute’ construction — which is commonly (but less appropriately, because anachronistically, as far as Aristotle is concerned) called the ‘copula construction’ — as they are discussed from 19b19ff. onwards. In fact, the disjunction bears on the twofold way in which the construction

consisting of the assertoric operator and the ‘name *plus* attribute’ assertible is ranged over by the operator can be interpreted. To understand this correctly it is important to emphasize Aristotle’s use of the verb συγκεῖσθαι (and distinguish it well from the use of προσκεῖσθαι and προσκατηγορεῖσθαι) and also to insist on Aristotle’s use of the phrase διχῶς λέγονται at 19b20.

In point of fact, I take it, the verb συγκεῖσθαι has its usual function in the context of the ‘is’ being additionally said as a third element, and concerns the twofold way in which the assertoric operator ‘is’ can affect a ‘name *plus* attribute’ assertible. To understand this function, it is useful to scrutinize what is meant by the phrase ‘being attributed as a third element’ (τρίτον προσκατηγορηθῆναι, used at 19b19).

In his commentary on *Int.*, Ammonius explains<sup>340</sup> this phrase by saying that, when he speaks of the aforesaid tripartite assertions, Aristotle does not mean to say that the ‘is’ is the third of three predicates used in the assertion, but rather that ‘is’ is a third element alongside the ὄνομα and ῥῆμα, and is a second predicate alongside the ῥῆμα.<sup>341</sup> While the ὄνομα represents that which the assertion is about (substrate or hypokeimenon; our ‘topic’), the ῥῆμα expresses what is said about the substrate (our ‘comment’). So the verb ‘is’ can be said to ‘be additionally predicated’ or ‘adpredicated’<sup>342</sup> (προσκατηγορεῖσθαι), Ammonius claims, and regarded as a ‘co-predicate’ (ἐπικατηγορούμενον).

Ammonius’s comment on our passage contains an interesting observation. Speaking about Aristotle’s example ἔστι δίκαιος ἄνθρωπος (19b20-21), he calls δίκαιος the proper attribute (κατηγορούμενον), though its combination with the subject-substrate does not yet produce a statement and the addition of ‘is’ is required to yield a statement. Thus Ammonius seems to be well aware that the statement is composed of an assertible, viz. the combined concept of ‘(man&just)’s be-ing’, and the assertoric operator ‘is’. None the less, Ammonius explicitly assigns the role of connective (the later copula) to ‘is’.<sup>343</sup> Clearly Ammonius regards the verb ‘is’ as the assertoric

<sup>340</sup> CAG. IV-5, p. 165<sup>5-30</sup>.

<sup>341</sup> Cf. Boethius, *In Periherm.*, ed. Ila, p. 265<sup>3-7</sup>: “Etenim in ea propositione quae dicit ‘homo iustus est’, ‘est’ tertium adiacet; praedicatur autem iam non tertium, sed secundum. Ergo tertium numeratum adiacet, secundum vero numeratum praedicatur”.

<sup>342</sup> For this rendering see Nuchelmans (1992), 8, n.5, and *Oxford English Dictionary*, s.v. ‘appredicate’.

<sup>343</sup> My sections 3.34-3.35.

operator which, by being *added to* the assertible, confirms, rather than brings about or represents, the combination.<sup>344</sup>

About two centuries later, Stephanus remarks<sup>345</sup> that in the passage at issue, Aristotle discusses statements that consist of a subject-substrate (ὕποκείμενον), attribute-predicate (κατηγορούμενον), and a third element which is ‘adpredicated’ (προσκατηγορούμενον). This third element is called ὑπαρκτικὸν ῥῆμα (‘substantive verb’), which implies that it is taken to indicate existence (ὑπαρξίς), i.e. that something is the case, which, as such — this should be borne in mind — is not the same as just coupling an attribute (predicate) with a substrate (subject).<sup>346</sup> The name ὑπαρκτικόν instead refers to the assertoric use of ‘is’ to indicate that what is signified by an assertible is really the case, such as in ‘[That Socrates is just] *is*’. This is another clue to the Greek commentators’ reminiscence of the role of ‘is’ as an assertoric operator ranging over a compound assertible in which the combination between substrate and attribute is already included.

Reverting now to the verb συγκεῖσθαι, let us follow the lead Stephanus has provided us with by suggesting that this verb refers to the hyparctic ἔστι being combined with the other elements, i.e. the ὄνομα and ῥῆμα (substrate and attribute). Taking Stephanus’s suggestion quite seriously, the difficult sentence under consideration should mean that the assertoric operator ‘is’ can be taken as combined *either* with the ὄνομα part (viz. ἄνθρωπος) of the assertible *or* its ῥῆμα part (δίκαιος). As we saw before, σύνθεσις is always used by Aristotle in the sense of a combination of a thought with ‘be’, most of the time of an assertible with the hyparctic ‘be’ acting as the assertoric operator.<sup>347</sup>

On this assumption, *pace* Weidemann (336ff.), the particle ἢ is definitely not used in its corrective sense, but indicates a real disjunction or alternative, and, more importantly, this alternative precisely explains Aristotle’s use of the adverb διχῶς at 19b20. This adverb is commonly explained by the modern commentators as referring to the four cases making up the two diagrams of 19b26-30 and 32-35. So, for instance, Weidemann (352) thinks that by the

<sup>344</sup> Generally speaking, the adherent of the copula construal will regard the function of the copula as performed ‘in actu significato’, not ‘in actu exercito’. For this distinction see Nuchelmans (1988), and (1992), 335-8.

<sup>345</sup> CAG XVIII-3, p. 39<sup>21-28</sup>.

<sup>346</sup> Otherwise you have to take the copulative ‘is’ to possess by itself existential import.

<sup>347</sup> My sections 2.1 and 2.3.

phrase αὐται μὲν οὖν δύο at 19b36-7 the διχῶς of 19b20 is taken up. However, these two diagrams are clearly regarded by Aristotle as making up only the first member of the pair of oppositions announced by διχῶς. This is clear from 19b36-37, where the second member of the pair, which is going to make up the group of assertions in which the 'is' focusses on the onoma, is designated as "the two other ones" ("Ἄλλαι δὲ δύο, according to the reading of the codex Marcianus and that found in the lemmata in Ammonius and Stephanus). Thus the διχῶς of 19b20 is in fact not taken up until at 19b36-37 by the αὐται μὲν οὖν δύο and ἄλλαι δὲ δύο.<sup>348</sup>

What is at issue, then, in chapter 10 from 19b19 onwards is that the assertoric operator 'is' can focus on the onoma part of the assertible, as well as its rhema part. This means that an assertion like 'Is: [(man&just)'s be-ing]' may be used to refer to either the state of affairs that there is a *man* (not a god, that is), who is just, or that there is a *just* man (not an unjust one). As we shall see presently, it is precisely this feature of the Aristotelian statement that accounts for there being two main types of negations, one bearing on the rhema part of the assertible ('there is a man, but he is not just'), the other on the onoma part ('there is something just, but it is not a man').

Before embarking on the issue of the (negative) assertoric operator's twofold way of focussing, viz. either on the rhema part or on the onoma part, it is useful to assess the relevance of this procedure in Aristotelian statement-making. As far as affirmative assertions are concerned, it does not make much difference, logically speaking, whether e.g. the formula 'Is: [(man&just)'s be-ing]' is meant to stand for 'There (He) is a just *man*' or 'There (He) is a *just* man'. But when it comes to denying such affirmative assertions, the distinction really matters if one intends to negate the manhood *or* the justness.

The double focus issue is peculiar to Aristotle's deep structure analysis of the statement-making utterance. As long as it is analysed on its surface structure in terms of the well-known copula construal, the denial of 'Man is just', being 'Man is-not just' will always boil down to removing the predicate from the subject, leaving the identification expressed by the subject term unaffected by the denial. This has as a conspicuous result that the denial having two truth conditions, one if there is a unjust man, the other if no man exists, in

<sup>348</sup> It will be argued below that the reading ἄλλαι δὲ δύο is of additional support for suspecting a textual omission at 19b38-20a1, and that this omission can explain how the word δύο was cancelled in most MSS.

fact can only be explained in terms of Aristotle's deep structure analysis: 'Is not: [that-there is a just man]'.<sup>349</sup>

### 3. 75 *Focussing on either the rhema part or the onoma part*

Let us now turn to the first part of the second main section (19b19-20a3). After the introductory sentence explaining how it is composed of two parts, it divides into part one (19b22-36), dealing with assertions in which the operator 'is' is said to be 'combined with', i.e. to semantically focus on, the finite or infinitated rhema part of the assertible, and part two (19b37-20a3), which discusses their counterparts, viz. the assertions in which the onoma part is focussed upon. The first group is subdivided into an exemplification of indefinite assertions (19b24-30), and that of the (universally) quantified ones (19b32-36). However, as our text now stands, the universal assertions are strikingly missing in the list drawn up at 19b38-20a1.

On the present interpretation of the verb συγκεῖσθαι, including our binary analysis of Aristotle's statement-making utterance into an assertible and an assertoric operator, and adapting Weidemann's conjecture (reading <τῷ> ὀνόμα(τι) ἢ <τῷ> ῥήμα(τι)) at 19b20-21), the following translation may be given of the introductory passage:

*Ibid.* 10, 19b19-24: When the 'is' is additionally said (προσκατηγορηθῇ) as a third element, there are two ways of expressing opposition. What I mean, is this. Taking for an example 'A man is just', I say<sup>350</sup> that the 'is' qua third element is taken together (συγκεῖσθαι) with *either* the onoma *or* the rhema in the affirmation. Because of this there will be four cases, two of which will be related, as to order of sequence, to the affirmation and the negation [i.e the affirmative and the negative operator]<sup>351</sup> in the way in which the privative expressions are,<sup>352</sup> while two are not.

<sup>349</sup> In *Cat.* 10, 13b12-33, the issue of the denial's two truth conditions is illustrated by Aristotle in terms of the twofold application of the components of the contrary assertibles, e.g. 'that-Socrates-is-well' and 'that-Socrates-is-sick' (13b13-14; cf. b22-23). Ackrill's translation (*ad loc.*) using the two indicative constructions, 'Socrates is well' and 'Socrates is sick' instead of the accusative *plus* infinitive phrases, obscures the argument to some extent. See my sections 3.88 and 4.75.

<sup>350</sup> ῥημί = 'I say', in the sense of 'I take it.'

<sup>351</sup> Here ἀπόφασις stands for the negative operator 'is not'; see 19b25-26. Cf. Weidemann, 340 and 345; also Ammonius CAG IV-5, p. 166<sup>17-21</sup>: ταῦτα μὲν οὖν δηλα, πλὴν ὅτι τὸ ὥστε καὶ ἡ ἀπόφασις [19b24-25] σημαίνει αὐτῷ τὸ ὥστε καὶ τὸ ποιοῦν τὴν ἀπόφασιν, τὸ οὐκ ἔστιν, ἢ τῷ δικαίῳ προσκείσεται ἢ τῷ οὐ δικαίῳ, καθάπερ τὸ ἔστι· διόπερ τὸ μὲν ποιήσει δύο καταφάσεις τὸ δὲ δύο ἀποφάσεις'.

<sup>352</sup> I.e. in the diagram, each time the finite term is followed by its privative counterpart.



Next Aristotle gives an example of the type of assertion in which the assertoric operator 'is' focusses on the finite or infinite rhema part of the assertible. He stresses this by means of the grammatical<sup>353</sup> position of 'is' or 'is not' right in front of the finite or infinite rhema part (19b25: προσκείσεται; b30: πρόσκειται):

*Ibid.* 10, 19b24-30: I mean that 'is' will be added either to 'just' or to 'not-just', and so, too, will its negation. So there will be four cases. What is meant should be clear from the following diagram:<sup>354</sup>

I

(a) 'Is: [(man&just)'s be-ing]';	<i>its denial being</i>	(b) 'Is not: [(man&just)'s be-ing]';
(c) 'Is: [(man&not-just)'s be-ing]';	<i>its denial being</i>	(d) 'Is not: [(man&not-just)'s be-ing]';

Here 'is' and 'is not' are added to 'just' and 'not just'.

The sentence (a) ἔστι δίκαιος ἄνθρωπος has provoked some discussion. Should it be taken to mean (a<sub>1</sub>) 'there is a just man' or (a<sub>2</sub>) 'a man is just'? Weidemann (334) rejects (a<sub>1</sub>) because, in his opinion, in (a<sub>1</sub>) the 'is' cannot be taken to be a *third* element. However, his view is based upon the common anachronistic view of the trinary structure of the Aristotelian statement-making utterance ('copula construction 'S is P') and shares the weaknesses of this analysis. As a matter of fact, once the binary structure of an assertoric operator ranging over a unified assertible has been assumed, the choice between (a<sub>1</sub>) and (a<sub>2</sub>) is to one's liking, since 'Is: [(just&man)]'s be-ing' can be indiscriminately taken to stand for both 'A (The) man is just' and 'There is a just man', or, speaking about a particular phenomenon at hand, 'This (It) is a just man'.

The second paragraph of this section (19b32-36)<sup>355</sup> discusses the universal assertions in which the assertoric operator focusses on the finite or infinite rhema part of the assertible. The intended diagram is followed by a remark concerning the truth-values of the diagonal assertions. While in the previous case, (Ia) and (Id), and also (Ib) and (Ic) are true at the same time, this does not hold for the

<sup>353</sup> While the verb προσκείσθαι mainly has a grammatical connotation, συγκεῖσθαι is used semantically, meaning that the notion of hyparxis is taken together with the semantic value expressed by the (finite or infinite) term of the assertible.

<sup>354</sup> I am using my own notation, where Aristotle uses expressions that only differ from colloquial Greek in the emphatic position of ἔστιν; my sections 2.13-2.14.

<sup>355</sup> Weidemann (331; 341-6) convincingly argues that the reference to the *Analytics* at 19b30-31 should be cancelled as an inappropriate interpolation.

subsequent (IIa) and (IIc), and (IIb) and (IId), respectively, since these pairs do not always share truth:

*Ibid.* 10, 19b32-36: There is also a similar arrangement if the affirmation is about the name taken universally, thus:

## II

- |   |  |
|---|--|
| (a) 'Is in every instance: <sup>356</sup><br>[(man&just)'s be-ing]' | (b) 'Is not in every instance:<br>[(man&just)'s being]'      |
| (c) 'Is in every instance:<br>[(man&not-just)'s be-ing]'            | (d) 'Is not in every instance:<br>[(man&not-just)'s be-ing]' |

Here, however, it is not in the same way possible for the diagonal assertions to be verified at the same time, though it is possible on occasion.

Weidemann (346) notes that at this point Aristotle fails to mention the contradictory opposition between the *E* and *I* sentences: 'Every man is not (un)just' vs. 'Some man is (un)just'. However, his observation is based on the wrong assumption that (IIb) and (IId) should enter into the inference pattern of the square of oppositions (which as such is *post*-Aristotelian, incidentally), and thus stand for the *O* sentences 'Not every man is (un)just'. In fact, just as at 19b17-18, the universal negatives only deny the universal affirmatives, leaving the question open whether 'every-not' or 'not-every' is the case, likewise here too, the opposition between (IIa) and (IIb), and (IIc) and (IId), respectively, is generic to contrariness and contradictoriness. This is an additional reason to opt for our copula-less notation.

Turning now to the other type of opposition announced by the διχῶς at 19b20, viz. those between assertions in which the assertoric operator does not focus on the rhema, but on the infinitated onoma part of the assertible, the foregoing discussion is closed. What is brought up next concerns the second group which was announced at 19b20-22:

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<sup>356</sup> In the subsequent cases of universal quantification the editions read the atonic ἐστίν (πᾶς ἐστίν ἄνθρωπος δίκαιος), but this is merely a matter of editorial policy. The emphatic position of the quantifier in front of ἔστιν (not the atonic ἐστίν) and its separation from ἄνθρωπος suggest that the quantifier is linked up with the assertoric ἔστιν to modify it. It is noticeable that (1) in cases of partial quantification (20a20ff.) the emphatic ἔστιν is itself modified by the enclitic τι, and (2) at 20a37-38 the word-order ἔστι πᾶς and οὐκ ἔστι πᾶς is found. Note that Aristotle takes the universal quantifier (a) to modify the assertoric (affirmative or negative) operator (6, 17b11-12; 10, 20a9-10), and (b) to co-signify the affirmation or negation of the onoma taken universally (10, 20a12-14). For the use of orthotonic and atonic 'estin', and the emphasis occurring in quasi-initial position see my *Index* s.v. 'Hermann Rule'.

*Ibid.* 10, 19b36-20a3: The foregoing, then, are the <first> two pairs of mutual opposites. The other two<sup>357</sup> are opposite pairs in which something<sup>358</sup> is added to 'not-man' taken as substrate, thus:

### III

- |   |   |
|---|---|
| (a) 'Is: [(not-man&just)'s be-ing]'     | (b) 'Is not: [(not-man&just)'s be-ing]'     |
| (c) 'Is: [(not-man&not-just)'s be-ing]' | (d) 'Is not: [(not-man&not-just)'s be-ing]' |

There will not be any more oppositions other than these. As for the last ones, they are a group on their own, separate from the others, in that they use 'not-man' as a name.

It must strike the reader that there is at least one difference between the two groups of oppositions. What is missing is the diagram containing universal assertions, running: 'Is in every instance: [(not-man&just)'s be-ing]' etc.<sup>359</sup> Their absence is the more striking considering that in the subsequent paragraph (20a3-15) the universal assertions are prominently at hand, directly in front of the indefinite ones. Since there is no good reason to exclude or omit the universal assertions of the second group — and Aristotle, please note, explicitly declares (20a1) that his list is complete — it is *a priori* highly probable that the enumeration of the universal assertions has dropped out as a result of haplography. But apart from any speculations on this account, there is one strong argument in support of supplying the diagram in question, in that three of the sentences of the omitted diagram will be spoken of later on (at 20a37-40), where they are referred to by the referral pronoun ἐκείνων (at 20a37). Finally, both the reading δύο (at 19b37) in the codex Marcianus and in Ammonius, as well as its omission in (the exemplar of) the other manuscripts can be reasonably explained, if a haplography is surmised.

On the assumption of a textual omission, the text after οὐκ ἄνθρωπος at 20a1 may be restored something like this:

<sup>357</sup> Reading "Ἄλλαι δὲ δύο; see my note 348.

<sup>358</sup> Reading τι(νός) προστεθέντος with Weidemann, 352; cf. Ackrill, 55.

<sup>359</sup> Whitaker has well observed this, but confines himself to pointing out (143) the omission and explaining that the fact that Aristotle does not consider this kind of **universal assertion** does not mean that to him such assertions are inadmissible. He rightly refers to the section 20a5ff., in which we see universally formed assertions with 'not-man' as subject. In point of fact, that the parallel passage (20a3-15) about **assertions** with an adjectival verb does contain such universal assertions is an additional reason for surmising a textual omission after 20a1.

19b39-20a1: οὐκ ἔστιν οὐ δίκαιος οὐκ ἄνθρωπος. (ὁμοίως δὲ ἔχει καὶ καθόλου τοῦ ὀνόματος ἢ ἡ κατάφασις, οἷον πᾶς ἔστιν<sup>360</sup> οὐκ ἄνθρωπος δίκαιος, οὐ πᾶς ἔστιν οὐκ ἄνθρωπος δίκαιος — πᾶς ἔστιν οὐκ ἄνθρωπος οὐ δίκαιος, οὐ πᾶς ἔστιν οὐκ ἄνθρωπος οὐ δίκαιος). πλείους δὲ τούτων ... κτλ.

This may be rendered:

'Is not: [(not-man&not-just)'s be-ing]'. <Likewise, too, if the affirmation is about the name taken universally, thus:

#### <IV>

- |   |   |
|---|---|
| (a) 'Is in every instance: [[not-man&just]'s be-ing]'     | (b) 'Is not in every instance: [[not-man&just]'s be-ing]'       |
| (c) 'Is in every instance: [[not-man&not-just]'s be-ing]' | (d) 'Is not in every instance: [[not-man&not-just]'s be-ing]'.> |

There will not be any more oppositions other than these.... etc.

In the last part of the second main section, an additional item comes up for discussion.<sup>361</sup> Whenever an adjectival verb, such as 'thrives' or 'walks' is used and the 'is' acting as a third element is not expressed, all things are the same, Aristotle argues, as if 'is' were added. No doubt, the author is alluding to the connotative 'be' included in any adjectival verb, and takes this 'is' to act as the proper assertoric operator, leaving the semantic value of the adjectival verb, which is expressed by its present participle, to be attached as the rhema part to the onoma of the assertible. The syncategorematic position of the universal quantifier is elucidated by comparing the universal assertions to the indefinite ones:

*Ibid.* 10, 20a3-15: In cases in which 'is' does not fit, for instance with 'thrives' or 'walks', the verbs have the same effect <as 'is' has in the previous cases> when they are so placed as if 'is' were joined on, thus:

- (a<sub>1</sub>) 'Is in every instance: [(man&thrive)'s be-ing]'<sup>362</sup>  
 (b<sub>1</sub>) 'Is not in every instance: [(man&thrive)'s be-ing]'

<sup>360</sup> On my view and notation, the verb qua assertoric operator is used emphatically, including its occurrence in quasi-initial position see s.v. 'Hermann Rule'.

<sup>361</sup> That this paragraph is not intended to bring about any third type of oppositions apart from the two previous ones announced by the διχῶς of 19b20 but only the adjectival verb variants of the previous ones, is patently clear from the fact that at 20a1 Aristotle has declared that there will be no more oppositions other than those listed in the previous lines.

<sup>362</sup> I am presenting my own notation, which for (a<sub>1</sub>) and (b<sub>1</sub>) is actually interpolated in the codex Ambrosianus and in Ammonius. *Pace* Weidemann (354), this interpolation is not the result of any misunderstanding on a scribe's part, but rather an explicative gloss that has found its way into the text. For the rest, all our MSS, and our other text witnesses as well, present the examples with the verb in the (unusual) emphatic position in front of the sentence.

(c<sub>1</sub>) 'Is in every instance: [(not-man&walk)'s be-ing]'

(d<sub>1</sub>) 'Is not in every instance: [(not-man&walk)'s be-ing]'

Here one must not say '[not-every man]',<sup>363</sup> but must add the negation 'not' to 'man'. For 'every' does not indicate that we have to do with a universal significate, but indicates that it is taken universally. This is clear from the following <cluster of examples>:

(e<sub>1</sub>) 'Is: [(man&thrive)'s be-ing]'      (f<sub>1</sub>) 'Is not: [(man&thrive)'s be-ing]'

(g<sub>1</sub>) 'Is: [(not-man&thrive)'s be-ing]'      (h<sub>1</sub>) 'Is not: [(not-man&thrive)'s be-ing]'

For these differ from the previous ones in not being universal. So 'every' or 'no' additionally signify nothing other than [the fact] that the affirmation or negation is about the name taken universally. Everything else, therefore, must be added unchanged.

Reviewing now what has been put forward by Aristotle in the second main section (19b19-20a3, including our suppletion of the supposed omission), its general purport appears to be to explain the correct procedure of negating, which is so vital in any (dialectical) dispute.<sup>364</sup> The opponent or respondent, it is made clear, must know that the negative particle 'not' can be applied to every component part of the assertion, to wit to the onoma part or the rhema part of the assertible, and to the assertoric operator as well. This procedure includes prefixing the onoma part with the syncategorematic 'every', but does not allow putting it before the rhema part.

Another peculiarity concerning the syntactical position of the quantifiers 'every' and 'some' should be noticed. In indefinite statements, the attributive term is always put in front of the substantive term (19b21; 19b27-29; 19b38 -20a1), while in the quantified statements, the inverse order is observed (19b33-35; 20a16-17; 20a19-23;<sup>365</sup> 20a28-29; 20a37-38). The position of the quantifier right before the substantival term is also easily explained by Aristotle's remark at 17b12-14 that when an attribute is universally assigned, it is not a genuine procedure to take this attribute universally as well — e.g. saying \*'[every man's being every animal]'

<sup>363</sup> An (incomplete) assertible, not an assertion is intended, the ἐστί at 20a7 going with the adiectivum verbale λεκτέον (at 20a8).

<sup>364</sup> For the relevance of disputational contexts and dialectical practice see my sections 2.51; 6.12.

<sup>365</sup> At 20a22, the word-order in Bekker's edition (ἄνθρωπος δίκαιος), which is supported by the codex Marcianus and the Greek exemplar(s) of the Armenian and Syrian translations, as well as by Ammonius, should be preferred to Minio-Paluello's (δίκαιος ἄνθρωπος); cf. at 18a5 and 17, where there is complete consensus about the reading τὶς ἄνθρωπος λευκός.

3. 76 *On contrary vs. contradictory opposition*

In the first part (20a16-20) of the third main section, Aristotle goes on to differentiate the above-mentioned generic negations (found in the diagrams II and IV) into contrary and contradictory ones. Thus the undifferentiated negation II (b) at 19b33-34, which was opposed to II (a) at 19b33, is now modified into the contrary opposite II (b<sub>1</sub>) to the affirmative II (a), and then the logical relations between II (a) and II (b<sub>1</sub>) are established in terms of truth-values; and the same thing is done with reference to their contradictory opposites.<sup>366</sup>

The most remarkable feature of this procedure is that, unlike in the previous section, the oppositions are taken between the assertibles, which, when they are actually applied to particular cases, are differentiated into contrary or contradictory *assertions*. At first, the initial generic opposition between affirmation and negation is differentiated into contrary and contradictory opposites:

*Ibid.* 10, 20a16-20: Since the contrary negative to 'Is in every instance: [(animal&just)'s be-ing]' is the negative that indicates that no animal is just, obviously these will never be true together or of the same kind of animal, but their opposites sometimes will, viz. 'Is not in every instance: [(animal&just)'s be-ing]' and 'Is in some instance: [(animal&just)'s be-ing]'.

Similar observations were already made in ch. 7, 17b20-26. There is a striking difference, however, between the two passages. In the present one the substrate is instanced by the generic concept 'animal', whereas in the parallel passage of chapter 7 the specific concept 'man' is found. This can explain why, unlike after 17b23-24, the author adds at 20a18 the words "or of the same thing", obviously referring to the possibility that at one time 'animal' is taken for 'human being', and for 'beast' at another. If I am right, the addition seems rather superfluous after the general warning against "the troublesome objections of sophists" at 17a34-37. But it may be that Aristotle wishes to emphasize that the contradictory opposites of the contrary pair may be true simultaneously of the same kind of animal, e.g. 'man', as instanced at 17b24-26.

So much for one explanation of the present passage. However, it can be read in another way. When Aristotle claims that the contrarily

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<sup>366</sup> Pace Whitaker (146), it is not until now that Aristotle goes on to examine possible inferences between the different types of opposite assertions; in the foregoing paragraphs they were already mutually opposed.

opposed *assertions* ‘Is in every instance: [(animal&just)’s be-ing]’ and ‘Is in no instance: [(animal&just)]’s be-ing]’ will never be true together (ἄμᾶ), he perhaps means to say that, logically speaking, their *assertibles* are mutually exclusive; and when adding “nor true of the same thing”, he may mean to say that the assertibles ‘[(animal&just) being]’ cannot be asserted or denied of one and the same object.<sup>367</sup> As in the parallel passage, 17b16ff., we have to distinguish between the phrase ‘not being true together’, which boils down to ‘being mutually exclusive’, and ‘not being true of the same thing’. The former is primarily said of contrary assertibles, whereas the latter only applies to (assertibles actually used in) assertions.

To claim, in accordance with 17b16ff., that the sentence ‘not every animal is just’ means that it is not the case that every animal is just (the II (b) of above), boils down to saying that the latter (II (b)) has two truth conditions, and, consequently, is true if one of them is met, viz. that an animal exists such that it is just, but false if no (just) animal exists at all. Hence they can sometimes be said (20a19) to be true together, and sometimes not.

In the second part (20a20-40) of this section, Aristotle continues to state some inferential relationships between assertions, in which the focus is on the variation of finite and infinite rhemata. So first the infinite attributive expressions are discussed (20a20-30); then, after a general remark on infinite terms at 20a31-36, a brief remark on infinite names (20a37-40) follows. The paragraph opens as follows (in order to facilitate the discussion with other interpretations of the text I follow the usual renderings of the example sentences):<sup>368</sup>

*Ibid.* 10, 20a20-23: ‘No man is just’ follows from ‘every man is not-just’, while the opposite of this, ‘not every man is not-just’, follows from ‘some man is just’; for there must be one.

<sup>367</sup> Ammonius (CAG IV-5, p. 180<sup>20-26</sup>) tries to explain the difference in a similar way, by associating their mutual exclusion to the unapplied assertions, and, quite understandably, their actually being said of one and the same object to the applied assertions: ἡμεῖς μὲν οὖν, ὡς εἴρηται, διηρημένως ἀκούομεν τὸ οὔτε ἀληθεῖς ἅμα οὔτε ἐπὶ τοῦ αὐτοῦ, τὸ μὲν λαμβάνοντες ἐπ’ αὐτῶν τῶν λόγων τὸ δὲ ἐπὶ τῶν σημαιομένων ὑπ’ αὐτῶν πραγμάτων. συμβαίνει δὲ ταῦτα συντρέχειν ἀλλήλοις· εἰ γὰρ ἅμα ἀληθεῖς οἱ λόγοι, καὶ τὰ ἐν αὐτοῖς κατηγορούμενα τῷ αὐτῷ ἅμα ὑπάρχουσι, καὶ τὸ ἀνάπαλιν. καὶ δῆλον ὅτι τοῦ ἅμα εἶναι ἀληθεῖς τοὺς λόγους αἴτιον γίνεται τὸ τὰ πράγματα συνυπάρχειν.

<sup>368</sup> On my notation they will run: ‘Is in every instance: [(man&not-just)’s be-ing]’ follows from ‘In in every instance: [(man&not-just)’s be-ing]’ [...] ‘Is not in every instance: [(man&not-just)’s be-ing]’ follows from ‘Is not in every instance: [(man&just)’s be-ing]’.

This sentence has provoked quite a lot of debate among both Ancient, Medieval and modern interpreters.<sup>369</sup> Since, as far as the lines 20a20-21 are concerned, this debate only concerns manuscript variants bearing on the word-order, which have no effect upon the sense of this sentence, I shall confine myself to the problems surrounding the text of 20a22-23.

Before going into these difficulties, let us consider the unproblematic part, first. At 20a20-21, Aristotle opposes 'no man is just' to 'every man is not-just'. To begin with, it is confusing to associate, with Weidemann (358), these sentences with the (post-Aristotelian) square of oppositions and label them *E*-sentence and *A*-sentence, because they have different predicates, one the finite term, 'just', the other the infinite 'not-just'. The inferential relationship, then, is said to be such that ( $\alpha$ ) 'no man is just' follows from ( $\beta$ ) 'every man is not-just'. This is a valid inference, since ( $\alpha$ ) has one of the two truth conditions of ( $\beta$ ) with the latter in common, viz. that there no just man exists, leaving open the possibility that no men should exist at all, which would ruin the other truth condition ('existential import') of ( $\beta$ ). Hence the inference is not bilateral, in other words ( $\alpha$ ) and ( $\beta$ ) are not equivalent. To express all this in terms of our second diagram (19b32-35), the ambivalence of (IIc) (= our b) yields ( $\beta$ ) two truth conditions, but once (IIc) has been differentiated, i.e. narrowed into the sense of the universal negative, ( $\alpha$ ), it has lost one of its truth conditions.

Coming now to the problematic lines, 20a22-23, Aristotle opposes ( $\gamma$ ) 'not every man is not-just' to ( $\delta$ ) 'some man is just', claiming (according to the reading found in all our MSS and testimonies) that ( $\gamma$ ) follows from ( $\delta$ ). The problem arises from the fact that the reason Aristotle seems to offer for the validity of this inference is that "there must be one <sc. just man>" (20a23). And the latter would seem, as commentators from Ammonius (181<sup>24-27</sup>) onwards have taken it (Weidemann, 258ff.), to support the inference from ( $\gamma$ ) to ( $\delta$ ), rather than the other way round.

In my opinion, the idea that the direction of the inference should be changed is not an option. For starters, the validity of the inference as it stands is beyond doubt, for, reading ( $\gamma$ ) like (IIId) (19b34-35) thus: 'It is not the case that every man is not-just', it has two possible

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<sup>369</sup> See Weidemann (358-64), who also discusses the different manuscript readings concerning 20a20-21.



truth conditions, namely (1) that a man exists such that he is just, or (2) that no men exist at all. As in the previous case, the consequent shares one of the two truth conditions of the antecedent, so that if the antecedent is true, the consequent is equally true. But this does not alter the basic fact that, again as in the previous case, the antecedent and the consequent are not equivalent, since the latter has only one truth condition in common with the former, so that there is unilateral inference, not equivalence between the two. I cannot see, therefore, why Hintikka (1973, 46f.) argues for the verb ἀκολουθοῦσι (at 20a20) to have the (impossible, in fact) sense 'are equivalent'. Again, I cannot see why Ammonius and many others (see Weidemann, who is among them) are of the opinion that the inference from (γ) to (δ) cannot be proved by Aristotle's explanatory sentence (at 20a23), which is why Weidemann proposes to alter the text accordingly and read that (δ) should follow from (γ). Why should the sentence "for there must be one" be implied in 'not every man is not-just', in spite of the fact that (δ) conveys existential import whereas (γ) does not?

Besides the fact that it is a mistake to believe that the explanatory sentence makes no sense if one leaves the inferential order presented in the text as it stands, the alteration of the order produces another difficulty. How are we to interpret the explanatory (γάρ) sentence at 20a23? For one thing, such an underscoring of the validity of a given inference by pointing out the truth of the antecedent is unparalleled in logical writings. What *is* found frequently is that the validity of a general logical rule is substantiated by proving it by means of other, more primitive rules. Thus in chapter 23 of *APr.*, all imperfect syllogisms are reduced to the universal modes of the first figure. For this reason, we should take the explanatory sentence not to be concerned with the validity of the given inference, but rather as evidence of the truth of the optimistic position expressed by the consequent that not every man is unjust. This position can reasonably be affirmed by stating that there must be at least *one* just man; otherwise the concept of 'justness' would be empty, empty indeed, since for Aristotle, any real existence of the Platonic Form 'Justness' taken apart from its instantiations existing in the outside world is out of the question. This may be compared to *Cat.* 5, 2a34-b6, where Aristotle claims (against Plato) that if no primary substances existed there would be no secondary substances either, meaning that for any form to exist it is required that it is instantiated somewhere in a substrate

(ὕποκειμενον).<sup>370</sup> For the rest, because of the naiveté of the remark at 20a23 (“for there must be at least one just man in this world”) one should not rule out that it is an edifying interpolation.

Next, the above rules are applied to the difference between assertions about singulars and those about names taken universally. The example is made more vivid by setting it in a dialogical context:

*Ibid.* 10, 20a23-30: It is evident too that, with reference to singulars, if it is true, when asked something, to deny it, it is also possible to make a true affirmation. For instance: “Is Socrates wise? No. Then Socrates is not-wise”. With universals, on the other hand, the corresponding affirmation is not true. For instance: “Is every man wise? No. Then every man is not-wise”. This is false, but then ‘not every man is wise’ is true; the latter is the contradictory statement, the former is the contrary.

Ackrill (144) rightly asks why Aristotle can allow the inference from the negative singular ‘No, <Socrates is not wise>’ to the affirmative ‘Socrates is not-wise’, which, unlike the former, has existential import. His reasonable suggestion that Aristotle is perhaps influenced by the actual subject-term, ‘Socrates’, of the example used may be supported by the consideration that, in a dialogical setting like the present one, the singular term occurring in the initial πρόβλημα-sentence refers to a (putative) actual person, who serves for the subject matter of the debate,<sup>371</sup> so that even the negative πρόβλημα-sentence conveys existential import.<sup>372</sup> It should be noticed on this account that, in so far as universal *assertions* are concerned, in the subsequent lines Aristotle clearly rejects the inference from ‘No, <it is not so that every man is wise>’ to ‘every man is not wise’.

The discussion is interrupted by a footnote-like remark (20a31-36) on the precise nature of infinite terms. Aristotle makes us aware that in framing oppositions one might be inclined to mistake infinite terms (whether onomata or rhemata) for disguised negative assertions. This would clearly endanger our framing of genuine oppositions, since infinitation cannot supply a term with any truth-value:

<sup>370</sup> De Rijk (1980), 40.

<sup>371</sup> Compare the dialectical practice dealt with in the *Topics*, where e.g. at I 2, 101a29-30 the use of the treatise for mental training is said to be obvious on the face of it, for if we have a method we shall be able to argue more easily *about the subject proposed* (περὶ τοῦ προτεθέντος). In the epistemonical procedure expounded in *APo.* too, the proofs basically concern subjects presented to us by sense-perception.

<sup>372</sup> Pace Soreth (1972), 412f. and Weidemann, 363f., this example does not yield sufficient ground for the view that Aristotle generally adopted the inference from a negative singular to its affirmative counterpart; see *Cat.* 10, 13b27-33.

*Ibid.* 10, 20a31-36: Opposite expressions that are framed along the lines of the infinitation of onomata and rhemata,<sup>373</sup> such as in the case of using 'not-man' and 'not-just' [i.e. when opposed to 'man' and 'just', respectively], might be thought to be a sort of (ὥσπερ) negative assertions not having the <required><sup>374</sup> combination of name *plus* verb. But they are not. For a negative assertion must always express a truth or a falsehood; but someone who says 'not-man', without adding something else, has no more said something true or false (indeed rather less so) than one who says 'man'.

The last sentence of this paragraph — whose purport may be compared to the remark made at 1, 16a16-18 — contains a rather strange aside ("indeed rather less so"), which could suggest that after all, a finite term has something of a truth-value, to a somewhat higher extent at least than an infinite term.<sup>375</sup> But this is surely not what Aristotle is saying or suggesting. His remark should be taken as concerning the information presented by our identification of things. When you successfully use a finite term to bring up something, you are more on the mark than if you use a vague, infinite term. Conversely, if the identification is mistaken, you are more off the mark by using a finite term than with an infinite term, which owing to its vague nature, will contain less false information than the precise, but false finite name.<sup>376</sup>

In the final part (20a37-40) of this section, the interrupted argument about assertions having an infinite term is taken up with a short discussion of the equivalence and non-equivalence of assertions in which infinite names are used. In fact, the items (IVa), (IVb), and (IVc) of our inserted diagram are here spoken of:

*Ibid.* 10, 20a37-40: 'Every not-man is just' does not signify the same as any of the above, nor does its opposite, 'not every not-man is just'. But 'every not-man is not-just' signifies the same as 'no not-man is just'.<sup>377</sup>

Thus the universal assertions of diagram IV are spoken of and

<sup>373</sup> This passage contains another clue that, for Aristotle, the concept of ῥῆμα comprises not only our 'verbs', but nominal attributes as well. See my section 3.28.

<sup>374</sup> See 19b10-12.

<sup>375</sup> Weidemann (364f.) interprets the remark in this way, and, quite understandably, in his line of thought, deems it an exaggerating, confusing addition (364: "so is dieser übertreibender Zusatz irreführend"), which is reminiscent of an old view of ἀλήθεια as standing for ontic clearness, quite alien to propositional truth.

<sup>376</sup> Cf. Ammonius CAG IV-5, p. 189<sup>15-25</sup> and Boethius II, 338<sup>1-25</sup>.

<sup>377</sup> In my notation, 'Is in every instance: [(not-man&just)'s be-ing]', 'Is not in every instance: [(not-man&just)'s be-ing]', 'Is in every instance: [(not-man&not-just)'s be-ing]', and 'Is not in every instance: [(not-man&just)'s be-ing]'.

referred to by ἐκείνων at a37.<sup>378</sup> First, (IVa): ‘Is in every instance: [(not-man&just)’s be-ing]’ is said not to signify the same as any of the previous ones, i.e. the universal assertions with the finite names arranged in diagram II (19b33-35), to wit (IIa): ‘Is in every instance: [(man&just)’s be-ing]’, (IIb): ‘Is not in every instance: [(man&just)’s be-ing]’, (IIc): ‘Is in every instance: [(man&not-just)’s be-ing]’, and (IId): ‘Is not in every instance: [(man&not-just)’s be-ing]’. The same holds, Aristotle argues, for (IVb): ‘Is not in every instance: [(not-man&just)’s be-ing]’. However, there is one equivalence to be stated, viz. that between (IVc): ‘Is in every instance: [(not-man&not-just)’s be-ing]’ and ‘In no instance: [(not-man&just)’s be-ing]’.

### 3. 77 *The so-called ‘Proclus’s canon’*

In the Greek commentary tradition from Ammonius onwards,<sup>379</sup> the last sentence about the equivalence of these two assertions, of which the affirmative has an infinite rhema, and the negative a finite rhema, has provoked the codification of a complete set of logical equivalence (‘convertibility’) rules for so-called ‘uniform assertions’, i.e. assertions containing the same subject (substrate) and predicate (attribute) terms. Stephanus (49<sup>24-28</sup>) speaks of ‘Proclus’s canon’, running “When a simple assertion is to be transformed (‘converted’) into an equivalent one (ἰσοδυναμοῦσα), you should maintain its (finite or infinite) subject as well as the (universal, partial, indefinite, or singular) quantity, but transform its (finite or infinite) predicate and its (affirmative or negative) quality into the opposite predicate and the opposite quality”.

The Greek commentators seem to have interpreted this canon not as an inference rule, but as a rule of equivalence,<sup>380</sup> and so to have adopted the invalid inference from a negative assertion without existential import to an affirmative with it. This much is certain, however: in the Medieval logical tradition, a similar transformation of

<sup>378</sup> Without the text inserted by the present author after 20a1, the demonstrative pronoun ἐκεῖνος, which, in the context of an opposition or comparison, always refers to remote things, must be taken to rather vaguely refer to all classes of assertions discussed earlier, as e.g. is assumed by Weidemann (362). Notice, however, that at 21b27 and 30-31, a similar, more specific use of ἐπ’ἐκείνων is found, where the foregoing non-modal assertions of 21b1-10 are referred to.

<sup>379</sup> Ammonius CAG IV-5, p. 181<sup>28</sup>-182<sup>30</sup>; Stephanus CAG XVIII-3, pp. 46<sup>23</sup>-47<sup>6</sup> and 49<sup>24-28</sup>; see Soreth (1972), 413ff. and Weidemann, 361ff.

<sup>380</sup> Soreth (1972), 410f.; Weidemann, 363.

such uniform propositions (then labelled ‘propositiones utroque termino participantes’), which was called ‘conversio per transpositionem’, only bears upon the valid inference from an affirmative proposition to a negative one, not the other way round, and thus requires both the quality and quantity of the convertible proposition to be retained.<sup>381</sup>

To my mind, however, none of this has anything to do with the isolated remark on propositional equivalence in Aristotle’s *Int.*, 20a39-40. In fact, Aristotle does deal with conversion in *APr.* I, chs. 2-3, but in that discussion no mention at all is made of the conversion ‘per transpositionem’.<sup>382</sup> As is clear from the present context (20a37-40), the isolated remark on equivalence at 20a39-40 fits in very well with Aristotle’s other remarks on the meaning of the assertions making up the fourth diagram.

However, the problem still remains that at 20a39-40 Aristotle seems to recognize Proclus’s canon, or, at least to admit the equivalence of an assertion without existential import with its counterpart conveying it. I think that this idea is a mistake, which is rooted in the common misconception that the text at a39-40 presents an opposition between two *assertions*, instead of two *assertibles*. In point of fact, unlike a37-38, the assertoric operator ἔστι is conspicuously absent at a39-40. Now if the two formulas ‘[every not-man’s being not-just]’ and ‘[no not-man’s being just]’ are taken to be unapplied assertibles, their significates coincide: and this does not alter the fact that when they are applied in actual assertions, they are no longer interchangeable (‘equivalent’), since when they are applied, one has existential import, the other does not. One has to realize indeed that existential import should only be assigned to (affirmative) assertions, not to their assertibles as long as they are not applied in an assertion.<sup>383</sup>

<sup>381</sup> See Peter of Spain, *Tractatus* called afterwards *Summulae logicales* (which was the logical textbook most in use up to the 17th century), I 15, p. 816<sup>24</sup>, ed. De Rijk (Assen 1972): “Conversio per contrapositionem est facere de subiecto predicatum et de predicato subiectum, manente eadem qualitate et quantitate, sed terminis finitis mutatis in terminos infinitos [not the other way round!]. Et hoc modo convertitur universalis affirmativa et particularis negativa, ut ‘omnis homo est animal’ — ‘omne non-animal est non-homo’; ‘quidam homo non est lapis’ — ‘quidam non-lapis est non-homo. Sciendum est quod si signum est in subiecto propositionis que debet converti, quodcumque sit, debet poni supra totum predicatum et reducere totum ad subiectum”.

<sup>382</sup> The Renaissance commentator, Sylvester Maurus, explains this: “quia non conducit ad reductionem syllogismorum” (*Comm. In Perih., ad loc.*).

<sup>383</sup> Bäck (2000, 277-83) rightly criticizes Ammonius’s interpretation of *Int.* 10 in terms of Proclus’s canon.

3. 78 *On changing the word-order*

There is another remarkable thing to be observed in the example offered at 20a39-40. Unlike all other occurrences of universal expressions, in the universally quantified expression as found here the adjective term precedes the substantive. One should notice that the other occurrences are all concerned with assertions, while in the present context two assertibles are given. None the less, the inverse order is still conspicuous. In virtue of the rule given at 17b12-14, it is not permitted to take the 'every' to go with the attribute 'just', reading \*'[not-man's being every not-just]'. Hence it follows that the inverse order, which is as an exception found at 20a39-40, is of no significance, semantically. This insignificance is precisely what Aristotle is going to give more attention to in the final section of this chapter, in which the change in word-order concerning the names and attributive expressions of an assertible is discussed.<sup>384</sup>

In the last paragraph (20b1-12) Aristotle intends to prove that the change of the word-order within the assertible of an assertion does not affect the meaning of the assertion. He instances the assertions (1) ἔστι λευκὸς ἄνθρωπος (= 'Is: [(pale&man)'s be-ing]') and (2) ἔστιν ἄνθρωπος λευκός (= 'Is: [(man&pale)'s be-ing]'). On the face of it, the issue is rather trivial, and seeing Aristotle's efforts to corroborate his view by trying to prove that one means precisely the same as the other, our surprise will only increase.

Traditionally, the equation has been taken to be purely grammatical: 'A man is pale' equals 'Pale is a man', and to choose one instead of the other is regarded only of interest for orators or poets.<sup>385</sup> In addition, what Aristotle presents as a 'proof' seems to beg the question (Ackrill, 145; Weidemann, 365). Ackrill (145) rightly complains

<sup>384</sup> Weidemann's surmise (365) that the lines 20a37-40 should immediately follow 20a23 inevitably makes the transition from 20a30 to 20b1-12 rather harsh.

<sup>385</sup> Boethius, *In Periherm.* ed. Ila, p. 344<sup>27</sup>-345<sup>7</sup>: "Ergo non idem valet oratoribus vel poetis verborum nominumque ordo mutatus; qui enim ad compositionem spectant, multum in ordine sermonum ornamenti reperient. Dialecticis vero, quibus nulla ad orationis leporem cura dicendi congruit quibusque sola veritas perscrutatur, nihil differt quolibet ordine verba et nomina si permutantur, cum tamen eandem vim quam prius in significatione retineant". Cf. Abelard, *Logica Ingredientibus*, p. 469<sup>34-37</sup> Geyer: "Haec autem transpositio gratia ornatus fit, cum vulgarem, idest communem, dispositionem vitantes, quae nimis certa erat, pro curialiate dictionis transponimus, ut si pro 'de domo Socratis' dicamus 'de Socratis domo'". Cf. Pacius II, 91-3. — For the grammatical freedom of word-order in Greek, and word-order in Greek as a secondary feature of style or emphasis see Kahn (1973), 113; 139; 255; 424-33.

that Aristotle does not make clear what in general would count as transposing the onoma and the rhema in a sentence, but is also of the opinion that Aristotle's account of onomata and rhemata elsewhere is neither clear nor comprehensive enough to enable us to say whether he is justified in claiming that such a transposition never affects signification. Ackrill seems to be right if Aristotle's account is interpreted in terms of the usual 'S copula P' construct. Things are different, however, if we take the analysis of the Aristotelian statement-making utterance as argued for in the present study as our starting-point.

If the above sample assertions are regarded as combinations of an assertible and an assertoric operator, the difference between them only concerns the word-order of assertible (a) in (1) 'Is: [(pale&man)'s be-ing]' against assertible (b) contained in (2) 'Is: [(man&pale)'s be-ing]'. Aristotle's first line of argument, then, is this: if assertible (b) does not have the same meaning as (a) it follows that there will be more than one negation of one and the same affirmation. This would violate the rule argued for earlier (17b37; 18a8-9), to the effect that any affirmation has only one negation as its contradictory opposite:

*Ibid.* 10, 20b1-4: If the onomata and rhemata are transposed they still signify the same thing, e.g. 'Is: [(man&pale)'s be-ing]' and 'Is: [(pale&man)'s be-ing]'. For otherwise the same assertion will have more than one negation, whereas we have shown that one has only one.

Next Aristotle has to prove that the assertion with (b) as its assertible has indeed the same negation as that with (a) and, consequently, has the same meaning too. What he must show then is that any attempt to assign to the assertion with assertible (b) its own proper negation different from the negation assigned to the assertion with assertible (a), is bound to fail. Now, any such attempt, the author seems to assume, should make use of the difference of meaning putatively conveyed by the word-order. Hence the negation of assertion [1] will run something like either \*'It is a *not-human* pale entity' or \*'It is a *not-pale* man', the former focussing the denial upon the substrate 'man', and the latter on the attribute 'pale' in the combination '[(man&pale)'s be-ing]'.

Thus, Aristotle argues, the proper negation of our (2), ἔστιν ἀνθρώπος λευκός, would run either 'it is *not* a pale *man*' or 'it is *not* a *pale* man'. At 20b7 and 9, the emphasis on the negation is expressed by Aristotle's pleonastic use of the particle οὐ. This use is frequently

found in Greek in contexts of denying and disputing to underline the negative character of a statement.<sup>386</sup> In Aristotle's examples, this pleonastic 'not' is attached to 'man', which is in the focus of the denial, so as to form the infinite term 'not-man'. In modern languages like English a pleonasm of the form: \*'it is not a pale [[not-]] man' is unidiomatic, if it is used to mean 'It is *not* a pale man'. So we should render the next lines, in which the emphatic negation of 'man' is considered, thus:

*Ibid.* 10, 20b4-7: For 'Is: [(man&pale)'s be-ing]' has for negation 'Is not: [(man&pale)'s be-ing]', while 'Is: [(pale&man)'s be-ing]' — supposing it is not the same as 'Is: [(man&pale)'s be-ing]' — will have for negation either 'Is not: [(not-man&pale)'s be-ing]' or ... etc.

In the subsequent lines, the Greek text should perhaps be read somewhat differently from the usual reading, in order to obtain a similar construction in which the emphatic negation of 'pale' comes up (at 20b8 and 10). At 20b8, we have to adopt the reading presented by our oldest testimonies, viz. the exemplars used by the fifth century Armenian and Syriac translations, and the old codex Ammonius must have had at his elbow. They all have a word-order (λευκὸς ἄνθρωπος) different from that (ἄνθρωπος λευκός) found in our MSS, the ones the modern editions (and Boethius as well) have followed. Moreover, analogously to the οὐκ infinitating ἄνθρωπος at b7 and b9, we have to insert the particle οὐ before λευκός twice, viz. at b8 as well as at b10, in order to obtain the matching infinitation of λευκός:

*Ibid.* 10, 20b7-8: ... or 'Is not: [man&not-pale)'s be-ing]'.

Next, Aristotle states that the negation containing the emphatic οὐ, pleonastically used, is in fact nothing but the proper negation of the affirmation with an infinitated name or attribute, so that the one-to-one rule of 18a8-9 is violated:

*Ibid.* 10, 20b8-12: But one of these is the<sup>387</sup> negation of 'Is: [(not-man&pale)'s be-ing]', the other of 'Is: [(man&not-pale)'s be-ing]'. Hence there will be two contradictory opposites to one statement. Clearly, then, if the name and the attribute are transposed the same affirmation and negation are produced.

<sup>386</sup> Cf. Liddell & Scott, s.v. D.; Kühner-Gerth II 2, 203-6.

<sup>387</sup> Rather than *a* negation (Ackrill), a rendering not required by the Greek, since the definite article is usually missing in an expression used in predicate position.



Thus Aristotle has proved that to assign a different meaning to assertibles (a) and (b) is bound to lead to the violation of the one-to-one rule, which is commonly phrased in terms of one single affirmation requiring one single negation as its contradictory opposite, but obviously implies that likewise one single negation cannot have but one single affirmation as its contradictory opposite.<sup>388</sup> Despite the suggestion made at 20b3, the violation of the one-to-one rule concerns the fact that one single negation, viz. 'Is not: [(pale&not-man)'s be-ing]', will be the contradictory opposite to both 'Is: [(pale&not-man)'s be-ing]' and 'Is: [(man&pale)'s be-ing]'; and likewise 'Is not: [(man&not-pale)'s be-ing]' to both 'Is: [(man&not-pale)'s be-ing]' and 'Is: [(man&pale)'s be-ing]'.<sup>389</sup>

Two things are clear now. However peculiar it may be, Aristotle's proof does not beg the question, since it does not in effect assume the equivalence of assertibles (a) and (b). What is even more important is that on our reading and interpretation, the entire paragraph of 20b1-12 gains considerable weight, since it now clearly fits in with the pivotal issue of the lion's share of chapter 10 (19b19ff.), in which Aristotle deals with the different ways the assertoric operator 'is' can focus on either of the two component parts of the assertible. As we have seen, in this procedure the word-order varies according to whether or not the assertion is quantified, the quantified assertions having the substantive in first position; while the indefinite ones have the attributive term immediately after the emphatic ἔστι. This word order is purely syntactical, not semantic, Aristotle seems to argue. This being so, it is useful to explicitly claim that as far as his analysis of the single statement-making utterance is concerned, Aristotle rejects any difference in meaning between the assertibles (a) and (b).

All things considered, however, I think the real reason behind Aristotle's identification of assertibles (a) and (b) should be looked for in his constant opposition to the metaphysical doctrine developed by his master, Plato. To Plato, an entity like 'pale man' is in fact a

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<sup>388</sup> Notice that the text at 18a8-9 is ambivalent on this score, not only since contradiction is a transitive relationship, but also because of the various manuscript readings. The Armenian and Syriac translations are based upon the Greek reading equivalent to "a single negation has a single affirmation for its contradictory counterpart". See the critical apparatus in Minio-Paluello.

<sup>389</sup> That the assertion containing assertible (b) is said (20b5-8) to have two different negations cannot be viewed as a violation of the one-to-one rule, because in the subsequent lines their validity as negative counterparts to this assertion is actually undermined.

*rendez-vous* of two instantiations from the Transcendent Forms, Manhood and Paleness, neither of which in principle has any primacy over the other. Hence 'pale man' may be indiscriminately considered an instance of 'pale manhood' or of 'human paleness'. But in Aristotle's ontological picture, the onoma ἄνθρωπος stands for a subsistent mode of being, whereas the rhema λευκός does not. We should never forget that the anti-Platonic notion of 'subsistence' ('substantiality') falling to particular beings, and eagerly denied by Aristotle to any Universal Being, forms the backbone of Aristotle's philosophy. Hence although the phrases '[(man&pale)'s be-ing]' and '[(pale&man)'s be-ing]' are different grammatically, they are semantically equivalent, in that they both signify an entity possessing the subsistent mode of being, manhood, accompanied by the coincidental mode of being, paleness.

### 3. 8 *Again, on correctly framing contradictions*

In chapter 11, the single designation issue is taken up again, still in the context of framing opposite assertions. It divides into three main parts: 20b12-30, 20b31-21a18, and 21a18-33.<sup>390</sup> The second and third parts (preceded by the introductory part, 20b12-30) deal with two counterpart semantic questions:

- (a) On what conditions can two attributes, each of which, when taken by itself, applies to something, be truly assigned to it taken together? (20b31-21a18)
- (b) On what conditions can two attributes applying to something, when taken together, be truly assigned to it separately? (21a18-33).

#### 3. 81 *The notion of 'making up one thing'*

In the introductory part, the requirement already discussed in chapters 5 and 8 reappears that the thing or things spoken of in an assertion should make up some *one* thing. The reader is warned that there being just one name does not as such guarantee that this basic condition is met. Indispensably, the thing under consideration must be some *one* thing, or to put it more precisely, the words used (whether names or attributive terms) must signify things that formally make up a genuine unity.

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<sup>390</sup> Weidemann, 366.

Ackrill (145) deems the author's treatment of the single statement issue "clearly unsatisfactory", since, in his view, Aristotle fails to recognize that a statement containing a name or attribute (or verb) that does not stand for a genuine unity, may nevertheless be itself a unitary statement, incapable of decomposition into simpler statements. So 'some men are educated cobblers' and 'no educated cobblers are wise' cannot be construed as conjunctions of simpler statements containing no such compound terms as 'educated cobblers'. In his comments upon chapter 8, 18a18ff., Ackrill (131) had already alluded to the possibility that assertions using a phrase like 'white walking man', which undoubtedly does not stand for a genuine unity, can none the less be a single statement, in the sense of an incomposite or unitary statement.

Ackrill's discontent would be quite to the point if 'single statement' were equivalent to 'incomposite or unitary statement'. The phrases 'to be a genuine unity' and 'to make up one thing' are used by Aristotle in a special sense: to Aristotle, a 'genuine unity' or 'one thing' is something that is designated by an expression which does not transcend categorial boundaries, as 'white walking man' (and 'white man' as well, for that matter) does. Thus nothing prevents 'the white walking educated man is a cobbler', which is not a single statement, from being a unitary, or incomposite statement. For to be a single statement, the subject expression it contains should not only signify (as it really does) an entity that makes up a genuine unity ('man') in the ontological sense, but also be designated by an expression which does not transcend the categorial boundaries.<sup>391</sup>

In order to fully understand Aristotle's notion of 'single statement', it is vital to remember his analysis of the statement-making utterance. He does not take it to be a 'S is P' construal, containing the so-called copulative 'is', but rather an expression composed of an assertible and an assertoric operator ('is' or 'is not') ranging over it. The 'singleness' of an assertion (affirmation or negation), then, depends on whether the subject expression *signifies* as it stands a genuine unity; that it may actually *refer* to a genuine unity, say, the man Socrates, is not enough. The unity meant should, therefore, be an ontological unity that is indicated by an expression which is categorially one. If this condition is not fulfilled, either by the name (20b12-21) or the attribute (a21-22), the affirmation or negation in

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<sup>391</sup> This issue plays an important part in *Met. Z*; see my *Index* s.v. 'quidditative unity'.

question is not single. One should pay due attention to the fact that at first (20b16-19) Aristotle speaks of (unapplied) assertibles, and then (b19-22) goes on to speak of someone actually using them in an affirmation:

*Int.* 11, 20b12-22: To affirm or deny one thing of many, or many of one, is not *one* affirmative or negative designation<sup>392</sup> unless the many things together make up some *one* thing. I do not call them one if there does exist one name but there is not some one thing they make up. To illustrate this, 'man' is perhaps 'animal' *plus* 'two-footed' *plus* 'tame', yet these do make up some *one* thing; whereas 'pale' *plus* 'man' *plus* 'walking' do not make up *one* thing. Hence, if **someone asserts** some *one* thing of these it is not *one* affirmation; it is one spoken utterance, but more than one affirmation. Likewise, if these **are asserted** of one thing, it is none the less more than one affirmation.

The use of one affirmation is put in the broader context of dialectical dispute. The assertible of the dialectical question, it is claimed, should express some *one* significate; otherwise, it cannot be answered properly, according to the rules laid down in the *Topics*. So at *Top.* I 4, 101b26ff., Aristotle declares that nobody should take him to mean that the assertibles composed of a substantive term and its attribute (whether genus, proprium, definiens, or accident) are themselves a πρότασις or a πρόβλημα; the latter in fact are made up of these components. The πρότασις, then, is instanced thus: 'Is not 'terrestrial two-footed animal' the definiens of 'man'? So the *one* significate here is the composed assertible (our '*that*-clause'): "that 'terrestrial two-footed animal' is the definiens of 'man' ". At *SE* 6, 169a6ff., the one-to-one requirement holding for the assertible taken by itself explicitly comes to the fore. There the fallacies that depend on the making of a plurality of questions into one are said to be due to our failing to clearly perceive the definition of πρότασις. For a πρότασις, Aristotle says, is a statement of *one* thing about *one* other thing (ἐν καθ' ἐνός). The 'oneness' here intended is clarified thus: "For the same definiens applies to 'one single thing' (ἐνός μόνου) and to 'thing' simply, e.g. to 'man' and to 'one single man'."

From the explanation just presented we can see that oneness is clearly associated with ontological homogeneity. On this assumption, the dialectical question's susceptibility of genuine contradiction is safeguarded:

<sup>392</sup> For this rendering of κατάφασις and ἀπόφασις see my section 2.21.

*Ibid.* 11, 20b22-26: So, given that a dialectical question demands as an answer either the statement proposed or its contradictory counterpart (the statement in fact being one member of the contradictory pair), there could not be one answer in the above cases, for the assertible of the question<sup>393</sup> itself would not be *one*, not even if it were truly applied. These matters have been discussed in the *Topics*.

The introductory paragraph winds up with a footnote-like remark on the correct way of framing dialectical questions (20b26-30): if we point at something and ask the simple question "What is it?" without giving an opinion as to what it might be in an assertible, this will not do, because the interrogator has to give the respondent the choice of stating whichever side of a contradictory pair the man wishes to argue for. So the questioner must specify further and ask whether something, say, a man, is *this* or *not this*.<sup>394</sup>

### 3. 82 *On assigning two conjoint designations*

In the second main part of this chapter, the author proceeds to deal with our question (a), on what conditions two things that, in one way or another,<sup>395</sup> are attributed to something separately, may be said of it in combination as well, the whole attributive determination being taken as one. One should well observe that this chapter deals throughout with the assignation of names or nominal and verbal attributes to bring up or describe something; hence the way in which the commentators<sup>396</sup> usually speak of sentence predicates attributed to a subject term is somewhat confusing. As is often the case, the semantic procedure is in order, not syntax. Thus when Aristotle uses the expression 'it is true to say "two-footed" or "pale" of a man', he primarily means that a man can be truly indicated by the name '\*the two-footed', or '\*the pale'.

<sup>393</sup> For ἐρώτησις as 'what is stated in the question', rather than the question as verbal formula, see the semantic Main Rules RMS and RSC; my section 1.71.

<sup>394</sup> Cf. *Top.* VIII 2, 158a14-20.

<sup>395</sup> The issue is discussed irrespective of the question whether or not cases are involved in which the many things which are said of something, or of which something is said, do make up one single thing in the sense under consideration here. In fact, most of the cases instanced do not, only those brought up at 20b33-34, 21a2-3, 21a15-16 and 17-18.

<sup>396</sup> Ackrill (146ff.), Weidemann (366ff.), Whitaker (150ff.) among others. Remarkably, Weidemann sometimes does seem to take the 'predicate' to be a designation serving for bringing up something, rather than a sentence predicate; e.g. when speaking (377) of "einem mit Hilfe eines Prädikats 'P<sub>1</sub>' *angesprochenen* [italics mine] Gegenstand".

To begin with, the problem is unfolded:

*Ibid.* 11, 20b31- 21a7: Of things said separately some can be assigned in combination, the whole attribute taken as one, others cannot. What then is the difference? Well (γάρ),<sup>397</sup> of a man it is true to say 'two-footed' separately and 'animal' separately, and also to say them as one; similarly, 'pale' and 'man' separately, and also as one. But if someone is good and a cobbler it does not follow that he is a good cobbler. For if <we adopt as a rule that> "because each of two things holds, both together also hold", then there will be many absurdities. For since of the above-mentioned person both 'pale' and 'man' are truly said, so also is the whole compound; again, if 'pale' then the whole compound; hence he will be a pale pale man, and so on *ad infinitum*. Or, again, we shall have 'walking pale musician', and then these compounded many times over. Further, given that Socrates is a man and is Socrates, he will be man-Socrates; and if two-footed and man then two-footed man. Clearly, then, one is led into many absurdities if one lays down unconditionally that the combinations will come about. How the matter should be laid down we will now explain.

The use of the participle συντιθέμενα to express the kind of unity ('oneness') deserves our special attention. In chapter 10 (19b19), which only dealt with incomposite assertibles, this verb was used to indicate the special way of relating the assertoric operator to either the onoma part of the assertible or its rhema part, while in this chapter (20b14 and 31), the union between the compound designations used in the assertible is considered and put to the test.

Throughout the procedure two problematic cases are put forward.<sup>398</sup> One is a case in which the conjoint assignment of two attributes may, but need not, be incorrect, although each of them can be truly assigned on its own (20b33-36); the other is a case in which the assignment of the compound designation would be absurd as pleonastic and nugatory (20b37-21a3). The former case is dealt with in the greater part of the next paragraph (21a7-16); the latter is dismissed by a brief remark (21a16-18) to the effect that wherever one attribute is contained in the other, the juxtaposition of these two is confusing in that this way of designating some entity is not representative of its genuine unity and may lead to absurd consequences.

From 21a7ff. onwards, the author sets out to solve our question (a) by dividing names and attributes into coincidental and non-coincidental ones. By using this device the problems surrounding the first

<sup>397</sup> After questions the conjunction γάρ is often used to introduce the answer; cf. Liddell-Scott s.v. I d.

<sup>398</sup> Ackrill, 146; Weidemann, 366ff.

kind of case covered by question (a) can be solved. It is claimed that the oneness required for genuinely combining attributes which, when taken separately, still apply, is vitiated by their only coincidentally belonging to a common substrate or to one another. Plainly, the attributes and the substrate they are assigned to, or associated with, must belong to the same category. While designations that do not formally and categorially represent a genuine unity of attributes may truly be applied to particular cases in which the attributes designated actually coincide, they nevertheless do not make up a genuine unity, ontologically, and, accordingly, they will fail to make up a single affirmation or negation:

*Ibid.* 11, 21a7-14: Of things attributed, and things they are attributed of, those which are said coincidentally, either of the same thing or of one another, will not be one thing. For instance supposing, a man is pale and also educated; then 'pale' and 'educated' do not make up, however, one thing <formally and categorially>, for they fall both coincidentally to the same thing [viz. man]. And so, even if it is true to say that the pale entity [viz. man] is educated, 'educated-pale' will still not make up some one thing; for it is coincidentally that the educated is pale, and so 'pale' and<sup>399</sup> 'educated' will not be some *one* thing.<sup>400</sup>

What Aristotle intends to claim here is that a person, say, Socrates, who is both pale and educated, can be designated by the expressions \*'the pale', \*'the educated', and even \*'the educated pale', and, consequently, what is called \*'the pale' can be indicated as \*'the educated' or \*'the educated pale'. But although in the case of the person Socrates these designations extensionally or referentially coincide, they still do not make up a formal or intensional unity. Now this is what is required for there to be a 'single' affirmation or negation, as it is defined at 20b12-15.

The next case under consideration is that of the person who is a cobbler, and also a good man, is taken up. The problem here is that the combination of two attributes which are truly assigned to a person separately, cannot be combined without one of them changing its primary meaning — as a result of the fact that owing to sememe-fusion, the two attributes are now going to make up a genuine

<sup>399</sup> Inserting καί, following (with Weidemann, 380f.) the codex Marcianus and the exemplar of the Armenian translation; cf. τὸ λευκὸν καὶ τὸ μουσικόν at 21a10-11.

<sup>400</sup> Reading μουσικὸν ἔν τι, following (with Weidemann, 380f.) the codex Marcianus, Ammonius, and the exemplar used by the Armenian translator.

(qualitative) unity they did not make up before. Thus again the combined assignment is blocked. For the sake of clarity, the ‘cobbler *plus* good’ case is opposed to that of combining ‘animal’ and ‘two-footed’, which do make up a genuine, formal unity, not transcending categorical boundaries, so that in this case there really is a ‘single’ affirmation or negation:

*Ibid.* 11, 21a14-16: For the same reason, the <case of> the cobbler who is (without specification) good will not do, but ‘two-footed animal’ will, since this is not a coincidental unity.

The first part of this sentence is a somewhat complicated way of saying that the conjoint attribute ‘cobbler *plus* good’ (‘good’ taken in its general sense, and not specifically applied to the man’s skill as a cobbler) when said of someone, does not make up the genuine unity ‘good cobbler’.

Next the other case in which the object under discussion is not addressed in its capacity of being a genuine unity (ἐν or ἐν τι, see 21a10 and 14) comes up for discussion:

*Ibid.* 11, 21a16-18: Further, <there is no talk of a genuine unity> where one of the things is contained in the other. This is why <in the above [20b37-40] case of a pale man> ‘pale’ is not repeated [in calling the pale man ‘pale pale man’]; and expressions like ‘animal man’ and ‘two-footed man’ will not do either, for ‘two-footed’ and ‘animal’ are contained in ‘man’.

What Aristotle has in mind throughout the present discussion is not to reject honourable assertions such as ‘Is: [(man&pale)’s be-ing]’ or ‘Is: [(man&animal)’s be-ing]’, but to make clear that they do not satisfy the requirements for containing as their assertible a single affirmation or negation as intended in the specific sense under discussion in this chapter.

Finally, in the third main part of the chapter (21a18-33), our question (b) is dealt with. Aristotle claims (21a18-20) that in cases in which a conjoint designation is truly applied, one is entitled to use the designations separately. For instance, if a particular man, say, Socrates, is correctly indicated by ‘a pale<sup>401</sup> man’ he may also be called ‘a man’ or ‘\*a pale’. However, this is not always the case, we are told in the subsequent lines. The author explains the exception by examining the semantic values of each of the components of the compound designation and the impact of one on the other in the compound:

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<sup>401</sup> Supplying (with Weidemann, 374f.) λευκὸν after τινὸς at 21a19.



*Ibid.* 11, 21a21-28: When in what is added some opposite is contained from which a contradiction follows, it is not correct but false <to assign one of the designations separately>, for instance, to call a dead man (a) man; but when no such opposite is contained, it is correct. Or rather, when some opposite is contained, it is always incorrect, but when it is not, it still is not always correct. For example, Homer is something, say, a poet. Does it follow that he is, or does it not? No, for the 'is' is said of Homer coincidentally; for it is because he is a poet, not in his own right, that the 'is' is said of Homer.

In 'dead man', the semantic value of 'man' is drastically affected by the attribute 'dead', which, in fact, contains a notion contradictory to 'man'; so a deceased person may be called 'dead man' ('former man'), but no longer 'man', because, in fact, he is a 'not-man'. The other case ('Homer is a poet') does not concern some flat notional contradiction causing the designation's formal incongruity, like in 'dead man', but rather the absurdity arises from the fact that the operator only applies to the *conjoint* designation expressed by the (incomplete) assertible ('being a poet'), not to the (complete) assertible's components separately, thus:

'Is: [(Homer<sub>&</sub>poet)'s be-ing]',

meaning that it is the case that-Homer-is-a-poet. Now from this it does not necessarily follow 'that-Homer-is' or 'that-a-poet is', since the assertoric operator only applies to the coincidence of the notions 'Homer' and 'poet', not to these notions separately.<sup>402</sup> Why not? you may ask. The answer is that the notion of 'living in the present time' conveyed by the present tense assertible 'Homer's being a poet' (which is obviously missing in 'that-Homer-was-a-poet') can only be assigned to his poems, his being ('living on') among us as a poet, that is, not to the person himself. That is why of a poet from the past whose works are completely lost, one says 'He was a poet', rather than 'He is a poet'.

The discussion of the third main part of the chapter is then summarized by stating on what conditions the procedure involved in question (b) is permissible. These are two, and they are to be met simultaneously:

*Ibid.* 11, 21a29-32: Thus, where <conjoint> designations (κατηγορίας) are concerned that not only contain no contrariety if names are

<sup>402</sup> In both examples the peculiar synthesis of the assertoric operator with the (components of the) assertible is examined: in one way this synthesis is allowed, in the other it is not. The 'Homer is a poet' issue is extensively discussed in Wedin (1978), 183-8.

replaced by their definiens, and are also assigned in their own right and not coincidentally, in these cases it will be correct to designate the particular thing by the unqualified designation [ἀπλῶς, i.e. not affected semantically by the other].<sup>403</sup>

The author finishes this exposition by alluding to the issue of Non-Being so hotly debated in Plato's *Sophist*.<sup>404</sup> In this case too it holds that from

'Is: [(what-is-not&thinkable)'s be-ing]'

one cannot infer

'Is: [(what-is-not)'s be-ing]',

because the operator only applies to the conjoint designation 'being thinkable', not to 'being' separately. Aristotle urges this explanation by underlining that what is (may be) thought of Non-Being precisely is that it is not, so that the assignment of the notion 'being' detached from 'being-thinkable' to what is not is flatly contradictory too:

*Ibid.* 11, 21a32-33: <Accordingly>, it is not correct to call what is not 'something that is' because it is thinkable; for what is thought about it is not that it is, but that it is not.<sup>405</sup>

### 3. 83 *Summary of chapter 11*

The discussion found in chapter 11 should be viewed in the context of the preceding chapters. What Aristotle has in mind throughout is to sketch the correct procedure of framing contradictions, for which the primary requirement is to start from what he has defined as 'single' affirmations or negations. Any framing of contradictory assertions is vitiated by using affirmative or negative expressions that are formally complex or incongruous. The special objective of chapter 11 is to explain on what conditions conjoint designations used in the assertible of an assertion do not frustrate the assertion's singleness, and to show the numerous pitfalls which may threaten our framing of proper contradictions.

<sup>403</sup> For ἀπλῶς see my section 1.3 and my *Index*.

<sup>404</sup> Esp. 256D-259D; see De Rijk (1986), 164-85. The same problem is discussed at *Top.* IV 1, 121a20-26, and the fallacious solution to it is alluded to at *SE* 5, 167a1-2.

<sup>405</sup> Weidemann (387f.) follows Boethius (IIa, 376<sup>6-9</sup>) in taking ὅτι (at 21a33) both times to be a causal conjunction ('because it is (not)'). Doing so, (a) one has to (rather oddly) assume that Homer is said to be *because* he is a poet, and (b), more importantly, the proper issue that the conjoint expression must not be split up is somewhat obscured. The ambiguity of the two ὅτι-sentences at 21a33 is pointed out by Ebbesen (1986), 116.

We have to realize once more that Aristotle primarily deals with the appropriate way of construing assertibles containing conjoint designations, that is, in such a way that it does not affect the singleness of the assertion. That it is assertibles, not assertions — let alone statements of the ‘S is P’ type — that are under examination will be still more apparent in the next two chapters.<sup>406</sup>

### 3. 84 *On using modal expressions*

Ackrill (149) has rightly observed that this chapter and the next contain important first steps in modal logic. While Aristotle elsewhere discusses modal syllogisms (*APr.* I, 3 and 8-22) and deals extensively with the modal notions of potentiality and possibility (*Met.* Θ), in the present chapter he is concerned with the question what negations effect a proper contradiction of modal affirmations (ch. 12), and what the logical relations are between assertions of different modalities (ch. 13).

The inquiry starts with a short introductory paragraph (21a34-37), in which the author proposes to consider how negations and affirmations of the possible-to-be (τὸ δυνατόν εἶναι)<sup>407</sup> and the not-possible-to-be are interrelated, and those between the admissible (ἐνδεχόμενον) and not-admissible, and also to deal with the notions ‘necessary’ and ‘impossible’, since there are some serious puzzles involved. As for the expression ἐνδεχόμενον, the rendering ‘contingent’ usually found from late Antiquity (Boethius) onwards is rightly rejected by Ackrill (149) and Weidemann (393-5) as “highly misleading”. Ackrill has rightly observed that Aristotle does not *expressis verbis* attach different senses to ἐνδεχόμενον and δυνατόν, and so there seems to be no objection to translating both terms by ‘possible’. Ackrill views them, therefore, as “two different (though equivalent) modal terms”, which in the present chapters require a different translation, viz. ‘admissible’ and ‘possible’, respectively, but he advises the reader to take the two terms as mere synonyms. This advice seems to find some support in the opening lines of the next chapter, where Aristotle (22a15-16) explicitly claims that from ‘possible to be’ follows ‘admissible to be’ and, reciprocally, the former from the latter.

<sup>406</sup> The resolution of arguments involving the expressions ‘is not A’ and ‘is not-A’ dealt with in *APr.* I 46 should also be seen in light of Aristotle’s own analysis of the statement-making utterance.

<sup>407</sup> For the various renderings needed in modern languages of the Greek δυνατόν see Ackrill, 149.

To my mind, however, things are somewhat more complicated. The difference between δυνατόν and ἐνδεχόμενον seems to be that the former term primarily focusses on the object under discussion and connotes its capability to be or become something or to perform or undergo some action, while the latter instead bears on the admissibility of one's consenting to the idea that indeed such a state of affairs as asserted about this object is possible. This difference, incidentally, mirrors the different forces of the two Greek verbs δύνασθαι and ἐνδέχεσθαι.

In the next lines, it is at first assumed that, given that in non-modal assertions the negation should be joined to the notion 'be' — including the 'be' implied in adjectival verbs — in order to frame a proper contradiction, in modal assertions it should likewise be added to 'be', and not to the modal term. However, this assumption leads to a puzzle, as will be shown at 21b12ff. First, the wrongly assumed analogy is broadly unfolded:

*Int.* 12, 21a38-b12: Given that of combined expressions those are contradictory opposites<sup>408</sup> of one another which are ordered by reference to 'be' and 'not-be' — for instance, the negation of 'to be a man' is 'not to be a man', not 'to be a not-man', and the negation of 'to be a pale man' is 'not to be a pale man', not 'to be a not-pale man'; otherwise since of everything either the affirmative expression or the negative holds, the log will be truly said 'to be a not-pale man'. Now if this is so, and also in cases where 'be' is not added, that which is said instead of 'be' will have the same effect — for example, the negation of 'a man walks' is not 'a not-man walks', but 'a man does not walk'; for there is no difference between saying 'that a man walks' and saying 'that a man is walking'. — So then, if this holds good everywhere, the negation of 'possible to be' will be 'possible not to be', and not 'not possible to be'.

It is extremely important to see that in this paragraph Aristotle primarily has contradictory infinitival phrases (or unapplied and even incomplete assertibles) in mind, not the contradictory assertions made out of such assertibles. So it is infinitival phrases that are indicated by the word τῶν συμπλεκόμενων ('combined expressions') at 21a38, not disguised indicative sentences, as is well observed by Ackrill (150).<sup>409</sup> Weidemann (399) seems to acknowledge this only

<sup>408</sup> Omitting (with the codex Marcianus, and Ammonius, followed by Weidemann, 396) the definite article αἱ, which was wrongly adopted by Minio-Paluello from the codex Ambrosianus, in which it unidiomatically precedes the noun ἀντιφάσεις used in predicate position.

<sup>409</sup> This pivotal distinction is blurred by Whitaker (156) easily speaking of

for the example presented by Aristotle at 21b3-5, and wrongly takes the remaining examples to represent indicative sentences, and, accordingly, the infinitive τὸ εἶναι to stand for the finite verb 'is'.

It goes without saying that according to our analysis of the Aristotelian assertion ('Is: [assertible]', and not in terms of the 'S is P' construal), Aristotle is perfectly consistent throughout the present treatise, as well as elsewhere (e.g. *Met.* Γ), in primarily focussing on assertibles, instead of complete assertions, let alone indicative sentences containing the finite verb 'is' as a copula. Weidemann's persistent identification of Aristotle's examples with indicative sentences of the post-Aristotelian 'S is P' type has needlessly complicated his interpretation of these examples; and some of his remarks (397-9; 406; 417, among others) on how to render them are altogether superfluous. For that matter, Ackrill's complaint (149) about Aristotle's "dangerously elliptical forms of expression" is quite to the point, generally speaking; but he does not seem to realize that in the present chapter, the indistinctness of the examples Aristotle presents is due to his intentionally focussing on the (complete or incomplete) assertible part of the assertion, instead of the assertion as a whole. Thus to ask (with Ackrill, and Weidemann, 415) Aristotle to write out all his examples in indicative sentences instead of infinitival phrases boils down to pushing him in the wrong direction.

Whereas the opposition between the affirmed and the negated adjectival verb is instanced by using opposed indicative sentences, the equivalence of the adjectival verb with its participle *plus* 'be' is expressed by an infinitival construction.<sup>410</sup> As was remarked just now, Aristotle sometimes expresses his examples in the colloquial way as 'S is P' construals, instead of presenting them in a form that is more in keeping with his own analysis of the underlying structure of the statement-making utterance, as he does elsewhere in the present treatise by using the assertoric ἔστι emphatically at the head of the sentence.<sup>411</sup>

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"abbreviated assertions".

<sup>410</sup> Unlike *Met.* Δ 7, 1017a27-30, where the equivalence too is expressed by using indicative sentences. For Aristotle indiscriminately using deep structure and surface structure formulas see my section 1.22.

<sup>411</sup> E.g. at *Int.* 7, 17b9-10; 15-16; 19; 25; 28-29; 31-33; 35; 18a2; 6-7. For other occurrences, see e.g. *APr.* I 46, 51b11-18; 52a1; 52a20-32, where one should not be led astray by the preceding ὅτι; for ὅτι introducing an 'oratio recta' see Liddell & Scott s.v. II.

Thirdly, the 'be' involved here is the connotative 'be' included in nominal and attributive expressions (including verbs), not the 'be' of the assertoric operator.<sup>412</sup> This is an additional reason for rejecting any analysis of the assertible in terms of (the putative) 'copulative be', which is often found.<sup>413</sup>

In the subsequent paragraph the puzzle emerges. Whenever in modal expressions you try to frame the contradiction by adding the negative particle to 'be' instead of putting it right before the modal term, your attempt will fail, because the two opposed expressions will not be mutually exclusive:

*Ibid.* 12, 21b12-24: Yet it seems that for the same thing it is possible both to be and not to be. For everything capable of being cut or walking is capable also of not walking or of not being cut.<sup>414</sup> The reason is that whatever is capable in this way has not always realized this capability, so that the negative expression too will hold of it: what can walk is capable also of not walking, and what can be seen of not being seen. But it is impossible for opposite expressions (φάσεις) to be truly said of the same thing. This then is not the <contradictory> negation. For it follows from the above that either the same thing is said and denied of the same thing at the same time, or it is not by 'be' and 'not be' being added that <contradictory> affirmations and negations are produced. So if the former <part of the alternative> is impossible we must choose the latter. The negation of 'possible to be', therefore, is 'not possible to be'.

Then Aristotle claims (21b24-26) that the same account holds for the other modal terms, 'admissible', 'necessary', and 'impossible'. He subsequently goes on to examine the composition of the combined expressions (called συμπλεκόμενα at 21a38), the non-modal as well as the modal ones, more closely. They are in fact (incomplete) assertibles,<sup>415</sup> and are analysed into 'underlying things' (or 'substrates') (ὑποκείμενα πράγματα) and the elements added, to wit the substrates 'man' and 'pale man' and the additions 'be' and 'not be' in the case

<sup>412</sup> So at 21b6; 21; 27; 30, the verb προστίθεναι and the substantive πρόσθεσις are used to refer to the addition of the connotative 'be'.

<sup>413</sup> E.g. in Whitaker, 156-70.

<sup>414</sup> Notice the chiasmic construction of 'cut' and 'walk'. For the rest, this two-sided capability is somewhat qualified in the next chapter, where it is argued (22b36-23a3) that not everything capable of being or of walking is capable of the opposites too, since there are cases of which this is not true. Fire, for example, is not capable of heating and of not heating, and the same goes for everything that is actualized permanently.

<sup>415</sup> Using (e.g. at 21b1-3) expressions such as 'a man's being' or 'a man's not being', not to attribute to some substrate, let alone to apply them to something of the outside world.

of non-modal expressions, and the substrate 'being' and the additions 'possibility' and 'admissibility' in modal expressions. Notice that Aristotle uses (at 21b30) the infinitives δύνασθαι and ἐνδέχεσθαι — not, δυνατόν εἶναι and ἐνδεχόμενον εἶναι, as at 21b23-25 — to express the abstract notions of possibility and admissibility:

*Ibid.* 12, 21b26-32: For what comes about is this: Just as in the previous [i.e. non-modal] examples 'be' and 'not be' are additions, while the underlying things are pale man<sup>416</sup> and man, respectively, so here 'being' serves as substrate, while 'possibility' and 'admissibility' are the additions, which determine the actualization (τὸ ἀληθές)<sup>417</sup> in the case of 'being possible' and 'being not possible', in just the same way as 'be' and 'not be' do in the case of a non-modal expression.

### 3. 85 *The semantic function of πρόσθεσις*

This paragraph contains a precious instruction about the semantic function of the respective 'additions' (πρόσθέσεις). They serve as determinants of underlying things, which are as such determinables devoid of actualization.<sup>418</sup> Thus the bare notion 'pale man' is here taken as waiting to be actualized, in a similar way as earlier, in chapter 3, the name ὑγίεια was taken to indicate the bare notion 'health' — unlike the rhema ὑγιαίνει ('thrives'), which expresses health as actualized in some concretum. Likewise, in the modal expressions, the modal notion serves as the determinant of the determinable 'being-so-and-so'.

An interesting point can be made on account of Aristotle's putative use of the copulative 'is'. In the notation applied in the present study, the modal operator ranges over a non-modal assertible. Thus e.g.

- 'Is possible: [(man&pale)'s be-ing]'
- 'Is admissible: [(man&black)'s be-ing]'
- 'Is necessary: [(man&rational)'s be-ing]'
- 'Is impossible: [(man&irrational)'s be-ing]'.

<sup>416</sup> Reading at 21b28 λευκός (with the codex Ambrosianus) and supplying ἄνθρωπος; De Rijk (1987), 56, n. 27.

<sup>417</sup> For this sense of ἀλήθεια see my *Index*.

<sup>418</sup> Actualization does not necessarily imply real existence ('factuality' or 'facticity'), nor does the notion 'concretum'; for the concretum and the actualized thing may be merely conceived of; see De Rijk (1981), 38-40. On other occasions, Aristotle underlines that our *applying* names (e.g. 'man') implies our being aware that they include the additional notion 'be' (my section 1.64), which can be considered weak-hyparctic, in contradistinction with strong-hyparctic, assertoric 'be', which denotes real existence ('facticity').

On this notation, the modal operator takes the place of the assertoric operator ('is') found in non-modal assertions, such as 'Is: [(man & pale)'s be-ing]'. Aristotle himself does not write out his examples, but only presents the different operators and reduces the assertible to the infinitive 'be', thus 'possible to be', 'admissible to be', and so on (22a24-31).

Whitaker (159) rejects Ackrill's view (149) that an 'it is' should be understood before the modal operator, and is of the opinion that modal operators take the place the 'copula' (supposedly) has in non-modal assertions. One may wonder, however, what combinatorial function such a 'copula' could have. It surely does not combine the components of the assertible or '*that*-clause', e.g. in Whitaker's example (158) 'that-Socrates-is-wise'. In light of Aristotle's view of the function of the additions (προσθέσεις) as determinants of the non-modal assertibles taken as determinables, we should instead explain the functional similarity between 'be' in non-modal assertions and 'possible', 'admissible' etc. in modal assertions as bearing on their assertoric function, which of course, has nothing to do with any task of combining the onoma and rhema components of the assertible.<sup>419</sup> Consequently, modal operators are unlikely to have any 'copulative' function.

### 3. 86 *On negating modal expressions. Continuation*

The next paragraph (21b34-22a8) presents some corollaries about the correct oppositions between modal expressions containing a negative particle. For instance, it is said that the correct negation of 'possible not to be' is 'not possible not to be'; this is why 'possible to be' and 'possible not to be' may be thought to follow from one another. As a matter of fact, it is possible for the thing expressed by one and the same (incomplete or complete) assertible to be and not to be: such assertibles are not contradictory to one another, as is the case with contradictory opposites, such as 'possible to be' and 'not possible to be', or 'possible not to be' and 'not possible not to be' or 'necessary (not) to be' and 'not necessary (not) to be'. Once again, the semantic structure of the modal assertibles is explained:

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<sup>419</sup> As was argued earlier, the notion 'be' found in the assertible is not 'copulative' either, but rather the connotative or intensional 'be' included in any onoma and rhema; my section 1.64.



*Ibid.* 12, 22a8-10: Universally, indeed, one must treat 'be' and 'not be' as (determinable) substrates, in the way as has been said before,<sup>420</sup> and the (modal) elements just mentioned must be joined on to 'being' and 'not being' to make up affirmative and negative expressions.

Finally, a concise survey of the correct way of contradictorily negating the modal expressions (φάσεις) is offered for each of them: 'possible-not possible'; 'admissible-not admissible'; 'impossible-not impossible'; 'necessary-not necessary'.<sup>421</sup>

In the next chapter (13), Aristotle sets out to deal with the inferential relations between the modal expressions discussed in the previous chapter, and arranges them in diagrams. For our purposes it suffices to emphasize that throughout this discussion Aristotle keeps focussing on (for the most part, incomplete) assertibles, not assertions, so that the inferential relations primarily bear on the unasserted modal assertibles.<sup>422</sup>

### 3. 87 *Contradiction, contrariety, and contrary beliefs*

The concluding chapter of our treatise is unlikely to have been originally written as part of *Int.*, but Ackrill (153) is right in saying that there is no cogent reason to doubt Aristotle's authorship.<sup>423</sup> It was perhaps added (or adapted?) by a redactor because of its subject matter, viz. the hotly debated problems surrounding False and True Belief as expressed by true and false speech.<sup>424</sup> The link between this

<sup>420</sup> For this rendering of ὡςπερ εἴρηται see my *Index* s.v. λέγειν.

<sup>421</sup> Weidemann (415) is quite right in deleting the pair ἀληθές-οὐκ ἀληθές at the end of this enumeration. Presumably, this addition goes back to a marginal note that found its way into the text, which had been added by someone who misunderstood the occurrence of the notion ἀληθές at 21b30-32. The added pair significantly does not feature in the diagram presented in the next chapter (22a24-31).

<sup>422</sup> Cf. Ackrill, 152. The ins and outs of this chapter, including some problematic issues are extensively spelled out by Weidemann, 418-53, and some of them are interestingly commented upon by Ackrill, 151-3. Gaskin (1996, 58) seems to be right in proposing to insert a μή before δυνατόν at 22b7-8 (reading: τῷ (μὴ) δυνατόν καὶ μὴ); he presents an ingenious explanation for its being omitted by a copyist: the phrase might seem pleonastic to the casual eye, as if what were meant is τῷ δυνατόν καὶ μὴ δυνατόν.

<sup>423</sup> As early as in Late Antiquity its authenticity was doubted on (Ammonius CAG IV-5, p. 251<sup>27-32</sup>; Stephanus CAG XVIII-3, p. 637<sup>12</sup>; see Dancy, 1975, 43), but they may have meant that it is not a genuine part of *Int.* However, Weidemann (454-73) has convincingly shown that chapter 14 cannot be smoothly embedded in the general line of argument of *Int.*, but his speaking (473) of 'abstruse reflections' ("verworrene Überlegungen") written down in this concluding chapter is debatable.

<sup>424</sup> E.g. Plato, *Sophist* 263D-264B; see De Rijk (1986), 209-12.

matter and that of *Int.* might be the question asked in the opening lines of this chapter (23a27-32), whether of the opposite statements expressing true and false belief both members are affirmative (e.g. 'every man is just' — 'every man is unjust') or one affirmative, the other negative ('every man is just' — 'no man is just'). In fact, the problem concerns the correct procedure of framing two contrary statements: should the relationship between the attributive terms be that of privation ('being just' vs. 'being unjust'), or contradiction ('being just', 'not being just')?

### 3. 88 *On true and false belief*

The question is then put into the context of true and false belief. The author begins by relating mental contents (i.e. beliefs qua 'things in mind') to spoken opinions, and tries to answer the question by examining what sort of false belief is contrary to a true belief,<sup>425</sup> the belief holding the latter's negation or that which holds its contrary. He explains his intention:

*Int.* 14, 23a39-b2; b7-9; b15-21<sup>426</sup>: What I mean is this: there is a true belief about what is good, viz. 'that it is good', another <false> one, 'that it is not good', and yet another, 'that it is bad'; now which of these two is contrary to the true one? And if these two are one belief, in which of the two wordings does the contrariety come about? [...]. Now, if about what is good there is (a) the belief 'that it is good', (b) the belief 'that it is not good', and (c) the belief 'that it is something else', something which does not and cannot hold of it [...], then what is good is both good and not bad, the former in itself, the latter coincidentally (for it is coincidental to it to be not bad). Well, the more true belief about anything is the one about what it is in itself; and if this holds for the true it holds also for the false. Therefore the belief 'that what is good is not good' is a false belief about what holds in itself, while the belief 'that it is bad' is a false belief about what holds coincidentally. Hence in the more proper sense the false belief about what is good would be that of the negative expression rather than that of the contrary.

Of course, Aristotle is not of the opinion that it is inessential to what is good to be not bad. Once again, his claim about what is good focusses on our form of addressing the object under examination. That is to say, when we are thinking and speaking about a good

<sup>425</sup> Following Weidemann's emendation (468) of the text at 23a38 (ψευδὴς ἀληθεῖ instead of ἀληθὴς ψευδεῖ), or at least his interpretation of the text of our manuscripts.

<sup>426</sup> The passages 23b3-7 and b9-15 contain footnote-like parentheses.

thing's goodness, our attention is focussed on what it is in itself, while when (truly) calling it 'a not-bad thing' (or falsely 'a bad thing'), we are directing our attention to a feature ('badness') that is not, and cannot be, found in the thing taken by itself, though this feature is associated with the thing in consequence.<sup>427</sup>

Next, the author goes on to evaluate the two opposite expressions (b) and (c), in order to determine which one contains the properly contrary belief. He uses the extent to which the believer is deceived as a touchstone to decide which belief is the most contrary to the true belief expressed by (a). He infers that the belief containing the contradictory attributive term must be the contrary in the proper sense. For the belief 'that something which is good, is bad', has a complex character, since when it is actually held by someone, this person must obviously suppose also 'that it is not-good' (23b21-27). Now, the author seems to infer from this: *the* contrary belief opposed to the true belief must have a single content, because, as we were told before (chs. 6-8), any complex content is bound to frustrate the framing of a genuine opposition, including contrariety and by the same token any genuine disputation.

Ackrill (153) is of the opinion that "the body of the chapter appears to argue that negations are in general the contraries of the corresponding affirmations, and this upsets the distinction between contraries and contradictories which was drawn in chapter 7; it also conflicts with *Cat.* 13b12ff., where 'Socrates is sick' has 'Socrates is not sick' as its contradictory and 'Socrates is well' as its contrary". I think Ackrill's perception is due to mistaking the opposition of (attributive) *expressions* (being assertibles) for opposite *assertions*. One should not render the phrase ἡ τῆς ἀντιφάσεως (at 23b24) 'the belief of the contradiction',<sup>428</sup> but 'the belief holding what is expressed by the contradictory expression'. One must keep distinguishing between (complete or incomplete) assertibles and assertions, and be aware that, grammatically speaking, the contents of beliefs are assertibles,

<sup>427</sup> Cf. Boethius IIa, 483<sup>6-10</sup>: "Sed quod dixit bono *accidere* ut malum non sit, non ita intelligendum est quemadmodum solemus dicere substantiae aliquid accidere. [...]. Sed 'accidere' hic intelligendum est 'secundo loco dici. Principaliter enim quod est bonum dicitur 'bonum', secundo vero loco dicitur 'non-malum'. See also below, and De Rijk (1988), 5-9.

<sup>428</sup> Ackrill (66); cf. Weidemann (35): "(die Meinung), die das kontradictorische Gegenteil zum Inhalt hat". The same applies to 23b29 and 32; at 24b7, ἀντιφάσις is a member of a pair of contradictory assertibles ('that-clauses'), not a contradictory statement. Dancy (1975: 145; 147) rightly has "a belief with a contrary predicate".

not assertions. As for assertions, including mental statements, they are not in order until there is talk about someone who, by framing an opinion or an assertion, is actually in error (23b21 and 31).

In the next paragraph (23b27-32), the author goes on to expand his argument, claiming that in any case the false belief holding a content which is contradictory to the true belief is the properly contrary belief. Once again, contradiction is concerned with assertibles, e.g. the incomplete one 'not being a man', which may (falsely) be applied to some particular, [*x*], who may be disguised or at such a distance that he is not easily identified as a human being, or to a particular class of things (e.g. 'barbarian'). Therefore to ask, as is often done,<sup>429</sup> whether the author possibly has silly sentences such as 'the good is not good' in mind is completely beside the point. When using terms like τὸ ἀγαθόν ('the good'), the author refers to something, which is in fact something good, no matter if it is a man, a stone, or something else, so that the false sentence equals 'This thing is not good'.

The subsequent paragraph (23b33-24a3) discusses true belief about a property being denied of something which really does not possess it, e.g. the true belief about what is not good 'that it is not good'. The conclusion is arrived at that the belief about the not good that it is good is the proper contrary to the belief about the not good that it is not good. From this it follows that, likewise, the false belief about what is good 'that it is not good' is *the* contrary to that about the same 'that it *is* good'.

### 3. 89 *From belief to spoken expressions*

The argument is expanded to affirmative expressions used universally:

*Ibid.* 14, 24a3-b1: Evidently, it will make no difference even if we take the affirmative expression to be universally used. For the universally

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<sup>429</sup> Ackrill, 154; Dancy (1975), 145-7; Weidemann, 463ff. Dancy's third complaint (143) about "some astounding confusions" in this chapter is not to the point either, owing to Dancy's own confusion about the true sense of κατὰ συμβεβηκός. In point of fact, this term does not bear on inessential properties such as Callias's justness, just as καθ' αὐτό does not refer to their essentially belonging. Whitaker (172, n. 1) has well observed that Aristotle does not mean his example of a true belief to be the tautological 'the good is good'. As is often the case, something which is brought up under the categorization 'good' is at issue. The misunderstanding here involved has much to do with the odd issue of 'self-predication of forms'; see my *Index s.v.*

used negative expression will be the contrary. E.g. the belief 'that none of the good things is good' will be contrary to the belief 'that every good is good'. For if in the belief about what is good 'that it is good' 'the good' is taken universally, it is the same as the belief 'that whatever is good is good'. And this is no different from the belief 'that everything which is good is good'. And similarly also in the case of what is not good.

Finally, in keeping with what was said at 23a32-35, Aristotle makes use of the analogy between beliefs and spoken expressions, and establishes the link with previous claims about contrariety versus contradictoriness (chs. 6, 17b16-26 and 10, 20a16-20). Incidentally, the author does not use indicative sentences (as Ackrill and Weidemann render them), but '*that*-clauses' (assertibles):

*Ibid.* 14, 24b1-6: If then this is how it is with beliefs, and spoken affirmative and negative expressions are symbols of things in the soul, clearly it is the universal negative expression about the same thing that is contrary to the affirmative one. For instance, the contrary to the assertible 'that every good is good' or to 'that every man is good' is 'that no good is good' and 'that no man is good', while 'that not every good is good' and 'that not every man is good' are opposed contradictorily.

The final conclusion runs:

*Ibid.* 14, 24b6-10: It is also evident that it is not possible for either a true belief or the true member of a pair of contradictory expressions to be contrary to a true one. For, it is true, those expressions which being said of the same thing<sup>430</sup> are opposites, are contrary to one another, and on account of the same thing, one and the same person may be right <in applying them>, yet it is not possible for contraries to hold of the same thing<sup>431</sup> at the same time.

### 3.9 Conclusion

Throughout the centuries commentators have had good reasons to deem the present treatise one of Aristotle's most arduous works. It is useful to highlight its main doctrinal positions. At the same time the question must come up to what extent Aristotle's linguistic tenets, those concerning the nature of statement-making in particular, come to the fore in the ways in which he undertakes to demonstrate his

<sup>430</sup> Following Weidemann's readings (471-3).

<sup>431</sup> I do not go the whole way with Weidemann, (473) who takes τῷ αὐτῷ to refer to 'the same person'.

philosophic convictions, especially when it comes to fighting rival positions at daggers drawn. The two final sections of this chapter are intended to discuss these themes.

### 3. 91 *The main outcome of De interpretatione highlighted*

(1) *Int.* deals with the nature of the statement-making utterance (λόγος ἀποφαντικός or ‘assertion’), its components, viz. ὄνομα, ῥῆμα, and λόγος, i.e. the (complete or incomplete) assertible or ‘that clause’, as well as the logical relationships between uniform assertions, that of contradictoriness and contrariety in particular. *Pace* Whitaker (2-4; 178-82), the treatise is not completely focussed on contradiction and so cannot be appropriately entitled ‘On Contradiction’ (Περὶ ἀντιφάσεως, Whitaker, 7), nor does it chiefly deal with the Rule of Contradictory Pairs (RCP), including three exceptions to this rule (*ibid.*, 78-131).

(2) ὄνομα and ῥῆμα (including attributive nouns and adjectival verbs) are the significative components of (the assertible making up) an assertion. They differ in that unlike the onoma, the rhema has time-connotation. Rather than the grammatical feature of tense, time-connotation is basically a matter of ontology and bears on the form signified by an onoma or rhema as being actualized or enmattered. Thus while e.g. ὑγίεια indicates the form ‘health’ irrespectively of its being or not being enmattered in some substrate, ὑγιαίνει signifies this form as actualized in something that is healthy (3.25-3.27).

(3) Contrary to the common view found from Ammonius onwards, the word ὅν used in chapter 3, 16b23-25, should not be interpreted in terms of copulative being (ἐστί) effecting a true or false assertion. As a matter of fact, from 16b23 onwards, the issue is not statement-making and the production of truth and falsehood, but rather the σύνθεσις of connotative or intensional being, which is included in any onoma and rhema, with the form signified by them (3.37).

(4) No copulative ‘be’ (‘is’, ‘is not’) is found in Aristotle’s deep structure analysis of the statement-making utterance. His analysis of the simple, single statement, e.g. ‘Socrates is wise’, should be noted thus: ‘Is: [(Socrates&wise)’s be-ing]’, reading something like: ‘It is the case that there is an entity, wise Socrates’. Although the copula construal ‘S is P’, including the use of a copulative ‘is’ nicely matches the surface structure, it is at variance with the Aristotelian deep

structure anatomy of the assertion as presented in *Int.* (3.4; cf. 1.51; 2.13-2.15).

(5) By ignoring the vital difference between unapplied assertibles and fully-fledged assertions, commentators raise objections against Aristotle's expositions throughout *Int.* which are entirely beside the point; see our *Index* s.v. 'assertible'.

(6) Aristotle does not know of our 'square of oppositions', nor, consequently, does he deal with partial assertions in terms of our *I* and *O* sentences (3.5).

(7) The famous chapter 9, which deals with the problem of *how* to apportion 'true' and 'false' to assertions made about contingent future events, fits in well with what was discussed before in chs. 7 and 8. In point of fact, this question turns out to be concerned with a decision problem, which Aristotle tries to solve by playing upon the distinction between unapplied assertibles and those applied in actual (contradictory) assertions (3.6).

(8) The important chapter 10, whose composition is somehow obscured by an apparent omission (around 19b38) as a result of haplography, presents a discussion of questions surrounding 'simple statement'. It mainly deals with (contradictorily) negating simple assertions, by either focussing on the rhema part or the onoma part of the assertible (3.7).

(9) Aristotle's concept of contradiction does not differ from ours (3.52). In the procedure of correctly framing contradictions, discussed in ch. 11, it is once again of paramount importance to observe the distinction between unapplied and applied assertibles (3.81-3.83). The same goes for Aristotle's discussion of modal expressions and their correct opposites (3.84-3.86).

(10) All things considered, Aristotle's analysis of the statement-making utterance elucidates the fact that to him the focal meaning of εἶναι and its cognates (ὄν, οὐσία) is what I have termed 'hyparctic'. In full accordance with this focal meaning, these terms are used to refer to a thing's or an event's being actually given, which is expressed by the assertoric functor, ἔστι. The focal meaning is also found in a weaker form as what I have called 'connotative or intensional being'. Connotative being is, so to speak, the ontic precondition of hyparxis in the strong sense, and as such is an as yet undetermined being-ness, which can be determined by categorial modes of being; accordingly, it is included in ('connoted by') every categorial mode of being.

3. 92 *The treatise's doctrinal and strategic position*

In the final analysis, Aristotle's semantics of the statement-making utterance (or 'apophantics') as expounded in *Int.* is quite modest, but it serves his purpose well enough for the narrow scope of issues he has to deal with, given his main objective of stating, as against Plato's ontology, his own view of how to speak about 'things' that really are the case.<sup>432</sup> As will appear in the next chapter, the apophantics of *Int.* is suitably supplemented by the semantics of naming found in *Cat.*, particularly Aristotle's doctrine of categorization<sup>433</sup>, which enables him to develop a method of scientific inquiry without having to take recourse to Platonic transcendent Forms.<sup>434</sup>

However, seeing that Aristotle's detailed treatment of the syllogism found in *APr.* is in effect no more than the formal treatment and development of the epistemonical qua-procedure sketched in general lines in *APo.*, while aprioristic syllogistic as such plays no role in the other works of the *Corpus*, it may be asked whether perhaps likewise the sophisticated apophantics of *Int.* has little impact on the Aristotle of the remaining works.

In point of fact, his treatise contains quite a lot of information about Aristotle's more detailed semantic views on statement-making of which there are hardly any significant traces in his philosophic discussions elsewhere. For instance, the extensive discussions of how to correctly frame contradictions, or how to mark off contradiction from contrary opposition, and the sophisticated examination of the diverse interrelationships between assertions and their proper denials in chs. 10ff. in particular, have all primarily to do with dialectical disputation, rather than for use in philosophical investigation.

This observation might lead us to evaluate whatever I have discussed in my sections 3.53 up to 3.89 merely in the perspective of dialectical training, and to join Whitaker's (1996, 2) view that *Int.* should be read closely with what is treated in the dialectical works *par excellence*, the *Topics* and the *Sophistic Refutations*. However reasonable the association of *Int.* with the latter treatises is,<sup>435</sup> to take this

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<sup>432</sup> For Plato's view see *Sophist* 260E4-264B9, and De Rijk (1986), 194-354. — It is noteworthy that in the technical treatise *APr.* the syllogistic premisses are not framed along the lines of *Int.*, but by using the verb ὑπάρχειν instead of εἶναι.

<sup>433</sup> See De Rijk (1988), *passim*.

<sup>434</sup> See De Rijk (1995), 78-102.

<sup>435</sup> From this point of view, I can agree with Whitaker. However, precisely the fact that he takes *Int.* to be *only* meant by Aristotle as a theoretical underpinning for



association as *the* characteristic of *Int.* might narrow its scope, as well as the impact Aristotelian apophantics had upon Aristotle's way of philosophizing, his strategy of argument in particular. To my mind, Aristotle's meticulous analyses of the ways in which we can (and are accustomed to, or should) put forward our intentions and convictions, including those in the domain of the philosophical disciplines, are clearly mirrored by what we read in, say, the *Physics* and *Metaphysics*, namely in the strategy of argument applied in these works.

To put this view of the role of Aristotelian apophantics to the test, it will suffice to point to the role Aristotle's deep structure analysis of the statement-making utterance has in the expositions of the Law of Non-contradiction (LNC) and the Law of Excluded Middle (LEM), and Aristotle's discussions with his predecessors, particularly Protagoras in *Met.* Γ, or in his treatment of several other main issues found in the central Books (ΕΖΗΘ) of *Met.*, where his basic philosophical positions (esp. *vis à vis* Plato) are under scrutiny (my sections 7.14; 7.16; 7.22; 7.31; 7.4; 7.7; 7.81; 8.2-8.5; my chapters 9-12 in general).

Be that as it may, you could object, there is at least the important issue of his strategy of argument, in which Aristotle seems to abandon his favourite analysis of the statement-making utterance. Considering that from as early as the discussions in *APo.* onwards, the qua-procedure has developed into *the* device of Aristotle's strategy of argument (my sections 2.73-2.76), and that the qua-procedure is based upon taking sentences on surface structure, including the 'S is P' construct, the question may arise whether in his practice of demonstrative argument, Aristotle in effect came to recognize the copula construction as basic, at the cost indeed of the deep structure, copula-less analysis which is distinctive of the semantics of *Int.* (my sections 2.14-2.16; 3.35).

To answer this question in the affirmative would imply our falling victim to optical errors. It is true, as we saw before (my section 2.75), while throughout *APr.* in fully-fledged syllogisms the attribution of properties to substrates is expressed by the use of the verbs 'to be said of' (κατηγορεῖσθαι) or 'to belong to' (ὑπάρχειν), rather than by using copula-constructions,<sup>436</sup> the representation of deductive

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dialectic, makes him ignore the intricate connections of our treatise with *Cat.*, and thus have a blind eye to the doctrinal as well as the educational impact these two treatises exerted on what we are taught in Aristotle's philosophic works.

<sup>436</sup> Aristotle only uses 'is' when he implements the dummy terms, A, B, Γ etc.,

arguments is still based upon the surface construction of sentences, retaining the use of 'is'. For instance, when the inferential nexus between several modes of being is evidenced by a fully-fledged syllogism, no copula-construction is found, e.g. 'If A is said of all B, and B of all C, A must be said of all C' (*APr.* I 4, 25b37-39); whereas, supposing that this syllogism concerns the (supposedly) essential relationships between 'being sensitive', 'being an animal', and 'being a man', in using the *qua*-locution the argument will run (esp. in Aristotle's 'scientific' works): 'A man is, *qua* animal, sensitive'. This happens *a fortiori* whenever the demonstration is concerned with singulars, e.g. 'Socrates is, *qua* animal, sensitive'

However, this view of the development of the Aristotelian strategy of argument can be objected to from several angles. Firstly. Although the *qua*-propositions are presented as assertions of the surface structure containing 'is' and 'are', the same holds, quite understandably, for all kinds of assertions found in Aristotle: why should he not speak and write colloquial Greek? As a matter of fact, the deep structure is sometimes also found or alluded to outside *Int.*, when Aristotle thinks that it is important to analyse statements properly; e.g. *Met.* Δ 7, 1017a31ff.<sup>437</sup> Besides, just like any other statement-making utterance occurring in the surface structure, the *qua*-proposition too can be presented in the deep structure notation, e.g. 'Is: [(Socrates-*qua*-animal&sensitive)'s be-ing]', meaning: 'That Socrates, *qua* animal, is sensitive is the case'. What is more telling, still, is that there is no good reason for assuming that in the surface formula the 'is' must be taken as the device that couples the attribute (predicate)-term to the substrate (subject)-term: throughout the pre-Ammonian period, fully in keeping with the common Greek view of 'be', the 'is' of the surface structure too was interpreted in terms of strong *hyparxis* or 'existence' or rather 'being given', rather than as just a non-assertoric copula.<sup>438</sup> Finally, and most importantly, the

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used in the proper syllogisms; see e.g. *APr.* I 9, 30b33-38: "For example, let A be 'animal,' B 'man', and C 'pale' ...".

<sup>437</sup> Also *Top.* I 1 (my section 5.41); *APr.* I 46, 51b12; 52a1; 52a20-32 (my section 6.27).

<sup>438</sup> Thus it is quite understandable that some Muslim commentators on Aristotle came to interpret his statement-making utterance in terms of a modified existential 'is', reading, e.g. 'Socrates is (a) man' (or 'is just') as 'Socrates is existent as a man' (or 'as just'); Bäck (2000), 2; 19-21; my section 2.17. Incidentally, whoever (in spite of what we have objected to his view in so far as Aristotle himself is concerned) follows Bäck in interpreting Aristotle's own theory of predication along the lines of these commentators, has to decode the Aristotelian *qua*-

fundamental significance of the Aristotelian deep structure analysis is the contradistinction, not to say the strong opposition, between assertion and assertible. Throughout Aristotle's works it is this distinction, bearing on the pivotal difference between, on the one hand, an unapplied assertible (which by definition does not possess a truth-value) and a fully-fledged assertion (with truth-value) on the other, which is at the basis of Aristotle's solutions to intricate philosophical problems. A quick glance at our previous discussions will suffice to reveal that in Aristotle's hands, this ubiquitous distinction operates as a *passe-partout*.

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proposition in terms of a twofold modification, one of the subject, the other of the existence, e.g. 'Socrates-qua-animal exists-as-sensitive'.

## CHAPTER FOUR

### THE DOCTRINE OF CATEGORIAL BEING

#### 4. 0 *Introductory note*

The little treatise on the categories has played a remarkable role in both the scholarly and the educational tradition.<sup>1</sup> Modern scholarship regards the work as doctrinally genuine, though there are some traces of editorial interference, particularly at the end of the torso-like chapter 9 and the beginning of chapter 10.<sup>2</sup> Although the so-called *Postpraedicamenta* (chs. 10-15) surely did not originally form a unity with the preceding chapters, like chs. 1-8 they are commonly considered genuine (early-)Aristotelian doctrine.<sup>3</sup>

#### 4. 1 *The proper status of the Aristotelian categories*

Over the past two centuries numerous scholars have been working on the treatise. But they never came to an agreement about the proper nature of the Aristotelian categories, and nothing suggests that we are any closer to an answer to-day. What is even more discouraging, the controversy traces back to a much earlier date than the modern period. Let us begin with the Ancient discussions.

#### 4. 11 *Late Antiquity and Middle Ages*

As early as in Late Antiquity there was much discussion about what precisely Aristotle's categories are meant to be. The Greek commentator Simplicius (writing after 532 A.D.) is most explicit about the

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<sup>1</sup> Oehler (1984), 37-119, esp. 107ff.; Frede (1987), 11ff.

<sup>2</sup> The (supposed) incompatibility of what Aristotle says about οὐσία in *Cat.* (and *Top.* ) with what is found in *Met.* has not forced the adherents of the incompatibility view to reject the treatise as spurious. A rather close doctrinal relationship between *Cat.* and *Met.* in this respect will be argued for in my section 4.43.

<sup>3</sup> De Rijk (1949); Oehler (1984), 110ff., and particularly Frede (1987), 11-28; 31; Barnes (1999), 34. It is commonly accepted now that the title Κατηγορίαι does not date back to Aristotle; also Ebert (1985), 116f.

different opinions on this topic.<sup>4</sup> He tells us (CAG VIII) that some people took the treatise to deal with φωναὶ σημαינוῦσαι, i.e. significative words (p. 9<sup>8-19</sup>), others with the entities signified by them (p. 9<sup>19-30</sup>: περὶ δὲ τῶν ὄντων αὐτῶν τῶν ὑπὸ φωνῶν σημαινομένων), while a third group of scholars (p. 9<sup>31-10<sup>4</sup></sup>) regarded them as ἀπλᾶ νοήματα, i.e. simple (isolated) thoughts — thoughts not involved in any combination (συμπλοκή), that is, as opposed to those that are part of a phrase or sentence.<sup>5</sup>

Simplicius rejects all these views. The first is out of order because it seems to focus on the linguistic form (λέξεις), thus making the categories a subject of grammar. The second view is cast aside since it appears to take the categories themselves as things. While the third one, he says, is wrong because it focusses on the mental aspect of the categories and thus misconceives them as though they belonged to the domain of psychology. Simplicius himself emphasizes that the categories are not just linguistic entities: they are special because they are linguistic expressions that are *significative* and so representative of things. Simplicius (10<sup>8-23</sup>) joins Alexander of Aphrodisias and Porphyry. The former takes the categories to be the highest genera which are said of all other things, and signify simple things as conceived of by simple concepts.<sup>6</sup> Porphyry typifies the categories as “the simple expressions significative of things *qua signifying them*, rather than in their capacity of being linguistic expressions”.<sup>7</sup>

All things considered, Porphyry’s formula virtually settled the long-standing dispute whether *Cat.* was about concepts or names, or the objects named.<sup>8</sup> This may also appear from what Porphyry says in his commentary on *Cat.*, where we read that the categories are primarily

<sup>4</sup> His master Ammonius too deals with this controversy (CAG IV-6, p. 8<sup>22-9<sup>16</sup></sup>).

<sup>5</sup> CAG VIII, p. 9<sup>31-32</sup>: ἄλλοι δὲ οὔτε περὶ τῶν σημαינוσῶν φωνῶν οὔτε περὶ τῶν σημαινομένων πραγμάτων εἶναι λέγουσι τὸν σκοπὸν, ἀλλὰ περὶ τῶν ἀπλῶν νοημάτων.

<sup>6</sup> *Ibid.*, p. 10<sup>17-19</sup>: ὥστε περὶ τῶν ἀπλῶν καὶ γενικωτάτων τοῦ λόγου μορίων εἶναι τὸν σκοπὸν τῶν τὰ ἀπλᾶ πράγματα σημαίνοντων καὶ τὰ περὶ τῶν ἀπλῶν πραγμάτων ἀπλᾶ νοήματα.

<sup>7</sup> *Ibid.*, p. 10<sup>22-23</sup>: αὐταὶ δὲ εἰσὶν αἱ ἀπλᾶ φωναὶ αἱ σημαντικαὶ τῶν πραγμάτων, καθὼ σημαντικαὶ εἰσιν, ἀλλ’ οὐ καθὼ λέξεις ἀπλῶς. Cf. p. 11<sup>2-6</sup>: καὶ ἡ μὲν λέξις κατηγορία λέγεται ὡς κατὰ τοῦ πράγματος ἀγορευομένη, τὸ δὲ πρᾶγμα κατηγορηματὴς οὖν κατηγορίας ἥτοι πράγματος ὄντος μετὰ τῆς σημαίνουσης αὐτὸ λέξεως ἢ τῆς σημαντικῆς λέξεως, καθόσον ἐστὶν σημαντικὴ, ἐκατέρως ἔχεται καὶ τῶν πραγμάτων ἢ κατηγορία. Ammonius seems to be less explicit in that he confines himself to rejecting the aforesaid views as incomplete, himself arguing CAG IV-6, p. 9<sup>17-10<sup>9</sup></sup>) for a ‘both-and’ position: “The Philosopher’s purpose is to lecture about words that signify things through mediating concepts”; *ibid.*, p. 10<sup>7-9</sup>.

<sup>8</sup> Lloyd (1990), 39.

the appellations by which we bring up the objects of perception and 'primary substances'.<sup>9</sup>

In the wake of Alexander, Herminus, Boethius, Porphyry and the divine, Jamblicus, and also Syrianus, as well as "our teachers" (p. 13<sup>15-18</sup>), Simplicius asserts that our treatise deals with isolated, primitive expressions *in their capacity of signifying things*, and it is in this framework that both expressions and concepts and things are considered.<sup>10</sup> The close association between things and thoughts cannot come as a surprise, indeed, because of the basic Ancient idea of the parallelism between being, thought and language.<sup>11</sup>

As for the Middle Ages, thanks to Boethius's authoritative description<sup>12</sup> of the categories as the words signifying things in their

<sup>9</sup> CAG IV-1, p. 91<sup>7-12</sup>: ἐπεὶ τοίνυν περὶ λέξεων σημαντικῶν ἡ πρόθεσις, αἱ δὲ λέξεις ἐπὶ πρῶτα τὰ αἰσθητὰ ἐπετέθησαν (τούτοις γὰρ πρώτοις κατ' αἴσθησιν ἐντυγχάνομεν), ταύταις καὶ πρῶτας ἔθετο ὁ Ἀριστοτέλης εἶναι οὐσίας κατὰ τὴν πρόθεσιν, ὥστε πρῶται αἱ αἰσθηταὶ κατ'ὀνομάσθησαν, οὕτως ὡς πρὸς τὰς σημαντικὰς λέξεις πρῶτας τιθεὶς τὰς ἀτόμους οὐσίας. cf. *ibid.*, p. 91<sup>23-27</sup>: ὥστε ὡς πρὸς τὰς σημαντικὰς λέξεις πρῶται οὐσίας αἱ ἄτομοι αἰσθηταὶ, ὡς δὲ πρὸς τὴν φύσιν πρῶται αἱ νοηταί. πρόκειται δὲ κατὰ τὰς σημαντικὰς λέξεις τὰ γένη τῶν ὄντων διελεῖν, αἱ δὲ σημαντικαὶ πρῶτως εἰσὶν τῶν αἰσθητῶν ἀτόμων οὐσιῶν. Lloyd (1990, 68-70) has good reason to expose the myth of a Porphyrian (or Neoplatonistic) 'nominalism'.

<sup>10</sup> *Ibid.*, p. 13<sup>11-15</sup>: ἔστιν οὖν ἐκ τῶν εἰρημένων δῆλον ὅτι ἔστιν μὲν ὁ σκοπὸς οἰκείος τῇ λογικῇ πραγματείᾳ περὶ τῶν ἀπλῶν καὶ πρῶτων καὶ γενικῶν φωνῶν, καθὼ σημαντικαὶ τῶν ὄντων εἰσιν, συνδιδάσκειται δὲ πάντως καὶ τὰ σημαίνόμενα ὑπ' αὐτῶν πράγματα καὶ τὰ νοήματα, καθὼ σημαίνεται τὰ πράγματα ὑπὸ τῶν φωνῶν. Cf. Olympiodorus, CAG XII-1, p. 18<sup>14-21</sup><sup>13</sup>. See also Simplicius CAG VIII, p. 56<sup>8-13</sup> (quoted in Ebbesen, 1987, 294, n. 25), where the semantic function of the categories happily prevails over its syntactical function. Ebbesen aptly paraphrases: "The categories with which Aristotle deals should be understood as widest predicates, 'predicates' here meaning words which we may apply to a thing, and primarily words which may function as *names* [italics mine] of sensible things. Porphyry has it that categories are used and said of (ἀγορευθῇ τε καὶ λεχθῇ) e.g. a stone". Boethius, *In Arist. Cat.* says (243C Migne): "Ubi cumque species sit, mox quoque *nomen* generis praesto est; ubi autem sit genus, non necessario speciei *vocabulum* sequitur". Also in the passage where Boethius (176D-177A) deals with the transitivity rule ('semantic entailment') of *Cat.* 3, the semantic character of the categories is unmistakable; Ebbesen (1987), 299. A lucid survey of the different (often controversial) views of the scope of *Cat.* in the Ancient commentators is found in Sorabji (1990a), 2f.

<sup>11</sup> Oehler (1962), 20-30; 147-50; Graeser (1977), *passim*; De Rijk (1978), 84; (1980), 2-3; Bäck (2000, XI). Cf. also Ax (1992), 254 ("Parallelität von Sprechen und Denken"). Also De Rijk (1952), 3-7, but in my study, the logical and ontological uses of the categories are still too sharply distinguished (*pace* Kapp, Von Fritz among others), instead of considering them the two sides of one coin. See also my section 1.2 in the present work.

<sup>12</sup> *In Cat. Comm.*, col. 160A1-3: "Est igitur huius operis intentio de vocibus res significantibus, in eo quod significantes sunt, pertractare"; some lines further on, this 'intentio comprehensa' is made more explicit: "idest, de primis vocibus significantibus prima rerum genera, in eo quod significantes sunt, disputare

significative capacity, the majority of thinkers were on the same track as the aforesaid Greek commentators, despite their differences on account of the exact impact of the parallelism thesis, and the function of thinking in particular. For the sixteenth century, the felicitous definition presented by Domingo de Soto may be regarded as representative: “*Liber praedicamentorum est de rebus in quantum nominibus significantur, et de nominibus in quantum significant res*”.<sup>13</sup>

#### 4. 12 *Kant and the aftermath*

Things have changed drastically since Immanuel Kant. He regarded Aristotle's list as a “meaningless rhapsody”, a hodge-podge not founded upon any principle of division or identification, and thus useless when it comes to founding our knowledge of the outside world upon. So he replaced it with his own conception of ‘category’. Categories should no longer be viewed as “the highest genera of being”, but rather considered the most universal forms of understanding which underly the formation of judgements.<sup>14</sup>

The development of the post-Kantian concept of ‘category’<sup>15</sup> has — unfortunately enough, for that matter — had a great influence on the diverse 19th.-cent. interpretations of the Aristotelian categories. For the purpose of the present study, I will confine myself to the highlights.<sup>16</sup>

Adolf Trendelenburg (1844-1941) tried to defend Aristotle's list of categories against Kant's charges by explaining the doctrine of the categories as a system of grammatical distinctions transferred to the domain of logic.<sup>17</sup> The mainly heuristic significance of Trendelenburg's theory was not paid due attention to, and his view was commonly rejected as being too far from the genuine philosophical purport of the doctrine.

Hermann Bonitz (1814-1888), who was, and still is an interpreter of Aristotelian thought of great repute, took the doctrine of the categories to be meant as a first, rough classification of things that are (τὰ ὄντα). To him, the Aristotelian phrase τὸ ὄν signifies concrete

(160B11-12); cf. 161A13-15.

<sup>13</sup> (1587), p. 109A.

<sup>14</sup> *Kritik der reinen Vernunft*. Prolegomena. B 107 (*Critique of Pure Reason*, Transcendental Analytic I, 2-3).

<sup>15</sup> See Oehler (1984), 47-56.

<sup>16</sup> De Rijk (1952), 89-92. Oehler (1984) presents (56-81) an extensive survey.

<sup>17</sup> *Geschichte der Kategorienlehre*. Berlin 1846.

being. He found the main argument in support of his view at *Top.* I 9, 103b20-104a1, where after having grouped the προτάσεις according to the four so-called ‘predicables’,<sup>18</sup> Aristotle passes on to their ontological division according to the ten categories. Bonitz was of the opinion that the original meaning of κατηγορία is not ‘predicate’, but “Aussage”, meaning that the categories represent the various senses in which the notion of ‘be’ is implemented. He pointed out that in certain passages of the *Corpus aristotelicum* the term κατηγορία clearly means ‘name’ or ‘designation’ rather than ‘predicate’, and presumed that from this basic sense its technical meaning developed.<sup>19</sup> In fact, Bonitz came very close to the pre-Kantian conception of the Aristotelian categories, despite his view that the categories primarily serve as a *classification* of the things there are (τὰ ὄντα).

Otto Apelt (1845-1932) was of the opinion that by rejecting Trendelenburg’s view of the grammatical origin of the categories, Bonitz too easily ignored the latter’s view that this origin comes to the fore in the ways in which they function in the sentence. To Apelt, the ‘be’ of the categories is simply the copulative ‘is’, which by itself is devoid of meaning and is implemented by the diverse categories.<sup>20</sup> Apelt assumed that Aristotle framed the doctrine of the categories by asking for the τί ἐστὶ of each predicate used in a sentence. On this assumption, the categories are the ‘untied predicates’ (“abgelöste Prädikate”), arranged according to their highest genera, which, accordingly, are the different kinds of concepts (“die Arten der Begriffe”), in so far as and in the way that they act as sentence predicates.<sup>21</sup>

<sup>18</sup> This utmost unfortunate (anachronistic) label will be discussed in my section 5. 24

<sup>19</sup> “Ueber die Kategorien des Aristoteles”, in *Sitzungsberichte der kaiserlichen Akademie der Wissenschaften*. Phil.-Hist. Classe X (Wien 1853), 591-645, esp. 591-5; 622. Bonitz refers to *SE* 31, 181b27, *Phys.* II 1, 192b17, *PA* I 1, 639a30, and *Met.* Z 1, 1028a28. In his rejection of Bonitz’s view, Ross (<sup>2</sup>1953) really turns, *Introd.* LXXXIV) things upside down by claiming that it is undesirable to divorce the technical sense of the word κατηγορία from its natural (*sic*) meaning of ‘predicate’.

<sup>20</sup> Noticeably, Apelt confuses what we have labelled earlier (my section 1. 64) ‘weak-hyparctic’ or ‘connotative’ (or ‘intensional’) being with ‘strong-hyparctic’ or ‘assertoric’ being as expressed by the assertoric operator (whose function is attributed to the so-called ‘copula’ of the well-known ‘S is P’ construal — the basic model of statement-making from the days of Ammonius and Boethius onwards).

<sup>21</sup> “Die Kategorienlehre des Aristoteles” in *Beiträge zur Geschichte der griechischen Philosophie* (Leipzig 1891; 101-216), 105-17. Apelt’s view is rightly criticized by Ross (1948), *Introd.*, LXXXV.



Apelt's view of the 'statemental' origin has been authoritative up to our day.<sup>22</sup> So Ernst Kapp's (1888-1978) position is not easily conceivable apart from Apelt's. In his thorough study of the Greek foundations of traditional logic,<sup>23</sup> Kapp (21) argues that many problems in the study of philosophy and its development were caused by the fact that students were supposed to begin their study of Aristotle with the little book entitled '*Categories*', "which treats predicates as if they were not predicates". On his view, this booklet marked an incisive turn in the history of thought, which, at the same time, was practically unavoidable: 'predicate' was going to be used in the sense of 'class of predicates', and, accordingly, as 'class of *things*' signified by such predicates.

The unfortunate next step (still on Kapp's assumption, 25-7) was to simply isolate the 'meanings' involved and to discuss them as meanings of words not combined into statements, that is, by taking the terms on their own, quite apart from any predicative relationship. Kapp (39) is even of the opinion that the categories, far from being taken — as they should be, on his view — as classes of predicates, are usually known in a function that is almost contradictory to their original constitution. They are seen not as a due and timely attempt to differentiate, for certain dialectical and philosophical purposes, the at times misleading uniformity of grammatical predication, but instead as an arbitrary and superficial survey of classes or general headings to which Aristotle tries to reduce any object of our thought. But, what is more, still on Kapp's view (39), it is of all people Aristotle himself who was responsible for the abandonment of his original point of view, since, in various writings of his, a more or less complete enumeration of the categories is used as a conveniently compendious inventory of the main aspects of *Reality*.<sup>24</sup> Even as early as in *Cat.*, the illusion was created that the ten classes of categories were intended, from the outset, to cover the entire field of the possible signification of 'single words', and might be used in that capacity. And this is something, Kapp (41; 50f.) thinks, which in Antiquity nobody could in the long run distinguish from their purport on the ontologic

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<sup>22</sup> Oehler too (1982, 65) regards Apelt's emphasizing of sentence predication as *the* origin and core of the categories as his particular merit.

<sup>23</sup> Kapp (1942); see also De Rijk (1978), 82-4; (1980), 2-3.

<sup>24</sup> On Kapp's view, interpreters such as Graeser (1977, 382) must be reckoned among the victims of this illusion because they take the categories to stand for "classes of different types of being", so that they must be considered "natural classes of extra-linguistic entities".

domain of 'things in general'. To Kapp's mind, Aristotle himself was the first victim of this illusion.

Kapp's view led him to assume that in Aristotle's own development there was a transition from the original and authentic logico-grammatical use (in *Top.*) to an ontological use (in *Cat.*). However, to make such a sharp distinction as Kapp does between logic and ontology testifies to a modern, post-Kantian way of thinking, which is entirely alien to the common Ancient view of the parallelism between being, thought and language. Therefore there is a great deal of post-Kantian confusion in Kapp's talk (39) about Aristotle's "abandonment of his original point of view". Moreover, there is something basically odd about Kapp's surmise that in Antiquity nobody could in the long run distinguish the classification of 'predicates' from that of 'things'. Why in the long run only? Had we not better presume that from the very beginning a sharp distinction between 'things *said*' and '*things* said' was out of the question, precisely because the Ancients adhered to the parallelism between being, thought and language?<sup>25</sup> What Kapp was doing was, in fact, reducing Aristotle's doctrine of the categories, in principle, to nothing but a classification of sentence predicates, which soon came to be misconceived, even by Aristotle himself, and so abused as a classification of beings.

Rather than seriously considering such speculations, which are so clearly affected by post-Kantian thought, we should revert to the congenial view of the Greek commentators and their later colleagues from the days before Kant.

#### 4.13 *Contemporary views*

In recent times, it is common doctrine that in its technical sense the term κατηγορία means 'predicate'.<sup>26</sup> This view implies that the

<sup>25</sup> Cf. the semantic Main Rules RMA and RSC; my section 1.71.

<sup>26</sup> Ross (1948), *Introd.*, LXXXIIff.; (1949), 23; De Rijk (1952), Ackrill, 80 ('predication' or 'predicate'); 161; Owen (1965), 97f.; (1986), 252; Moravcsik (1967), *passim*; Barnes (1975), 119; Oehler (1982), *passim*; Guthrie VI (1981), 140; Weidemann, 211f. — In De Rijk (1952), 89-91, the technical term is traced back to the general use of the noun κτήγορος ('revealing') and the verb κατηγορεῖν (not, 'to accuse' originally, but just 'to say about'). To give just one example, in Hippocrates (*De arte*, 13<sup>19-20</sup> ed. Jones = 12 ed. Littré), we read: "Again, when respiration is symptomatic (κτήγορον), by uphill roads and by running, it compells nature to reveal (κατηγορεῖν) symptoms". In common Greek the substantive noun κατηγορία always has the sense of 'accusation'. Obviously, in coining the technical term Aristotle returned to the original sense of its root ('revealing').

categories primarily have a syntactical function. Before I argue for the opposite position and defend an approach to the matter from the semantic perspective, I would first like to discuss a pertinent view of how to arrive at a proper insight into the true nature of the Aristotelian categories, as it has been put forward in recent years.

Michael Frede<sup>27</sup> follows Kapp in his mistrust of *Cat.* as a reliable source for settling the question of the proper nature of the categories, and criticizes modern scholarship because they keep turning to this little treatise to get an answer. He (30) raises doubts as to the question whether this entire treatise or even part of it was ever meant to be about categories. He is surely right in rejecting the later title 'Categories' as an argument *pro*. But Frede is also of the opinion that the term 'category', which is used only twice (he claims) — towards the very end of the first part (8, 10b19 and 21) — occurs in such an incidental way that nothing of interest can be inferred. Accordingly, Frede (31f.) proposes to turn to the *Topics* for an answer to our question.

To my mind — leaving aside his characterization of the term κατηγορία in the tract on qualitative being (ποιόν, ποιότης), which seems just a matter of opinion, as well as his overlooking two of its occurrences in the very heart of the treatise (ch. 5, on οὐσία, 3a35 and 37) — Frede has no strong case against *Cat.* as an informant about precisely what being a 'category' (κατηγορία) comes down to. For one thing, together with the *Top.*, it is *Cat.* alone which (ch. 4) presents the full traditional list of the ten categories; why should they be genuine 'categories' in one treatise, and fail to be so in the other? For another, the way in which in *Cat.* ch. 3 the inferential relationships between genera and species are, however briefly, spoken of is not only fully in keeping with what in *Top.* I, chs. 4 ff. is extensively dealt with in the context of the so-called 'predicables', but also, remarkably enough, in *Cat.*, these relationships are stated in the framework of κατηγορεῖσθαι (1a10, 11, 13, 14, 22, 23). The use of this verb is surely not coincidental; it is also found at 2a21, 22, 23, 25, 27, 28, 30, 32, 33, 37; 2b16, 20, 31; 3a4, 16, 17, 19, 25, 28, 35 (together with the substantive, κατηγορία), 38; 3b2, 4.<sup>28</sup> Moreover, the contexts

<sup>27</sup> Frede (1987), 29-48.; cf. Frede (1985), where the author (19) even presses the (erroneous) opposition between subject and substrate as important for our understanding of *Met.* Z 3.

<sup>28</sup> The verb is also found in the second part of the treatise ('*Postpraedicamenta*'): ch. 10, 12a1, 7, 14, 16, 40; 12b29.

in which it occurs clearly illustrate the focal meaning of the substantive κατηγορία.

Turning to the crucial text of *Top.* I 9, Frede (32-5) rightly chooses to understand κατηγορία as a verbal noun (in Frede's words: 'predication'), rather than a nominal one ('predicate'),<sup>29</sup> but, in doing so, he sticks to the aforesaid long-lasting convention of taking this term in the syntactical context of statement-making, instead of the semantic one of just 'naming' and 'appellation' or 'designation'. Frede (35) draws the following conclusions concerning Aristotle's use of the word κατηγορία in *Top.*:

- (1) The word is used in the sense of 'predication';
- (2) Likewise in the sense of 'kind of predication';
- (3) It is also used to refer to *one* of the several distinctions between kinds of predication; in its technical sense, it literally means 'kind of predication', but in its technical use it is restricted to one of these several distinctions
- (4) Unfortunately, there is yet another use of the term. Since the kinds of predication define classes or kinds of predicates, namely, the classes of those predicates which occur in a *statement* (*italics mine*) of a given kind of predication, viz. the category of quality defines the classes of predicates called qualities — by extension, κατηγορία seems to be used also for the kinds of predicates thus defined.

Three kinds of things, at least, should be distinguished now, Frede, (*ibid.*) takes it: (a) the categories in the technical sense of the word, (b) classes of predicates defined by the kinds of predication in question, and (c) the ultimate genera of what there is, as they are distinguished in e.g. the treatise *Cat.*, since these ultimate genera of beings clearly are not kinds of predication, nor can they be identified with the classes of predicates. In Frede's opinion, the crucial difference between taking the κατηγορίαί as the classes of predicates (*Top.*) and considering them the ultimate classes of entities (*Cat.*)

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<sup>29</sup> De Rijk (1952), 91 and Ackrill, 80, also start from the verbal noun (Bonitz, *Index* 377b60f. 'actio praedicandi'), without suggesting that this basic sense does not apply to or is not to be gathered from *Cat.* To Smith (1997, 74), there is no problem at all ("In fact, the word κατηγορία simply means 'predication'"). Ebert rejects the rendering κατηγορία 'predicate' and argues (1985, 117ff.) for the rendering 'predicable predicate', and takes κατηγορούμενον to stand for 'predicated predicate'. Owen (1965, 97; 1986, 252) speaks of a general agreement "that for 'X' to be predicable of 'Y', in the sense required by *Cat.*, it must be proper to say 'Y is X' ('or 'is an X' or 'is a kind of X')". Note that Owen's concept of predicability suffers from the multifarious senses of the copula 'is', which has been so eagerly attacked since Stuart Mill. My sections 1.4 and 4. 14.

comes to the fore if we look at how in *Top.* the first category is brought up in a different way than in *Cat.* In *Cat.* it is labelled οὐσία (ch. 4, 1b26ff.), while in *Top.*, τί ἐστὶ (ch. 9, 103b22).

Frede (36f.) is quite right in pointing out that in *Top.* the formula τί ἐστὶ ('what it is') is not restricted to substances but covers coincidental beings as well; at the outset this is claimed *expressis verbis*.<sup>30</sup> However, as will be argued for below (in my discussion of *Cat.* ch. 4 and *Top.* I, 9), like the phrase τί ἐστὶ, the word οὐσία bears on a thing's 'essential mode of being'. Now whenever something taken as substrate (ὑποκείμενον) is in the focus of interest, just like οὐσία, the phrase τί ἐστὶ refers to the thing's 'being-ness' or 'essence' as subsistent being ('substance'), whereas if a thing's coincidental mode of being (e.g. 'quantity', 'quality') is under examination, the latter phrase quite naturally bears on the essence of that mode of being alone.

Frede (38-44) even goes so far as to argue that the evidence that there is a category of substance is merely circumstantial, and that a good deal of this evidence is inconclusive. However, throughout this discussion he apparently takes the opposites of Substance (category of quantity, of quality etc.) as classes of *entities* to be well distinguished from 'substances'. In a similar fashion, in his account (41f.) of *Met.* Δ 7 ("a most obscure chapter", he deems it), where Aristotle distinguishes between being *per se* and being *per accidens*, Frede is of the opinion "that *per se* being is the being of *per se* beings and that accidental being is the being of accidental beings", and that "an accidental being is something like a red thing or a healthy man, as opposed to the color red, justice, health, or a man, all of which are *per se* beings".

Frede's arguments are far from convincing. Since the categories do not classify entities taken by themselves, but our ways of bringing them up, in the same way the expressions 'being *per se*' and 'being *per accidens*' classify the different ways in which we can focus on the things there are, rather than that they objectively divide the domain of what is. Frede (44ff.) thinks that the acceptance — the re-introduction from *Cat.*, one would say — of the 'category' of substance is due to a development of doctrine which is reflected by a severe restriction on the use of the phrase 'what it is', particularly in *Met.* Z.

<sup>30</sup> *Top.* I 9, 103b27-39. The broader sense of τί ἐστὶ as covering the whole domain of the categories is also argued for by Malcolm (1980/81), *passim* and Ebert (1985), 127-30.

But, for Aristotle, this development certainly did not include such a radical change of his view of οὐσία as is imputed to him by Frede.<sup>31</sup>

All things considered, Frede's arguments against *Cat.* as a source for our knowledge of the proper nature of the Aristotelian categories are not convincing, to say the least.

#### 4. 14 *The categories as classes of names. Categorization*

From about 1980 onwards, I began to have increasing doubts concerning the usual view on the proper nature of the categories, and proposed to take the semantic function to be the basic one. As a consequence the technical terms κατηγορεῖν and κατηγορία would be given the focal meaning of 'naming', 'appellation', 'designation' — or, if you like, 'non-statemental predication' — whereas the sense 'sentence predication' should be regarded as a secondary one, depending on a term's occurring in predicate position, which is all a matter of syntax, rather than semantics.<sup>32</sup>

The usual association of the Aristotelian categories with some kind of sentence predication is bound to find some stumbling-blocks on its way.<sup>33</sup> The first category, which undoubtedly is the protagonist of the list, has individuals (πρῶται οὐσίαι) as its primary members. But these are defined by Aristotle as 'that which is neither present in a substrate *nor said of any substrate*' (*Cat.* 2, 1b3-4; cf. 5, 2a34ff.). Thus

<sup>31</sup> My section 4. 43. I fully agree with Brinkmann (1981) defending the consistency of Aristotle's thought on substance. Cf. also Leszl (1975), 553-6, and Matthen (1988a), who rightly (155, n. 11) rejects any major divergence between the doctrines of οὐσία as found in *Cat.* and *Met.*

<sup>32</sup> In the following discussion, and in many others throughout the present study, I am fully aware that in modern languages you may also use the label 'predicate' in cases of non-statemental assignment of names and attributes to something. Thus e.g. the Shell Company is entitled to bear the 'predicate' 'Royal', which means that Shell may call itself 'The Royal' (Dutch: 'de Koninklijke'). This by no means should lead us, however, to argue for the truth of a sentence like 'The Shell is royal'. Indeed, the predicate 'the Royal' is merely an alternative *name* for this Oil Company, not a predicate signifying one of the Company's properties. I do not use the term 'predicate' (in its broad sense) for κατηγορία, since in fact, whenever κατηγορία is rendered 'predicate', translators — like the historians of logic, for that matter — have 'statemental predication' in mind. Incidentally, the abstruse idea that in Plato there is something like 'self-predication' of Forms is due to a similar confusion; De Rijk (1986), 316-22, and my *Index* s.v. Likewise the discussion about 'self-predication' in Lewis (1991, 37-48; cf. 16), where Aristotle's evaluation of the 'Third Man Argument' is viewed as representative of his earlier metaphysical theory, is far from clearing things up.

<sup>33</sup> De Rijk (1988), 3-9. Ebbesen (1990b, 379) is quite right in remarking that the 'predicates' with which Aristotle deals are meant as "names of sensible things".

the members *par excellence* of the central category are anything but 'predicates': they are even defined as 'non-predicates'.

There are many other passages in Aristotle's works where the rendering 'predicate' or '(sentence) predication' will not do.<sup>34</sup> In this connection, *Met. Z* 1, 1028a27-28 is of particular interest. It is perfectly clear that in the entire section 1028a10-30, Aristotle is analysing names and seemingly sentence predicates taken as names. It is the significative force of words like 'walking' and 'being seated' that is under examination from 1028a20 onwards, quite irrespective of their being assigned to, or said of, or used merely denotatively to stand for, substrates endowed with the properties (coincidental modes of being) signified by those names.

In *Met. Z*, chs. 4-6, the author is likewise investigating the names (designations) assigned to things. In these chapters, the metaphysical problems at issue are tackled precisely by scrutinizing the several ways of naming or 'categorization'.<sup>35</sup> Putting this into a broader context: what Aristotle has in mind in the discussions of the central books of *Met.* is to disclose the proper candidate for the name οὐσία. Since being as such (τὸ ὄν ἢ ὅν) is to be looked for in the everyday world, his most pressing problem is to grasp the everyday things' proper nature *qua beings*. In this search, naming plays the decisive role. The solution to the problem consists in finding the most appropriate ('essential') name to be assigned to each and every thing — a name that focusses precisely upon the thing's proper being-ness.<sup>36</sup>

<sup>34</sup> E.g. *Top.* I 15, 107a3-4 (τὰ γένη τῶν κατὰ τοῦνομα κατηγοριῶν); *SE* 22, 178a5 and 31, 181b26-27; *APr.* I 23, 41a12; *APo.* I 19, 81b24-82a3; 22, 82b37ff.; 83a24ff.; 83b15-17; *Phys.* II 1, 192b17; III 1, 200b28; 2, 201b27; V 1, 225b5; 4, 227b5; VII 1, 242a35; *Met.* Γ 4, 1007a33-b1; Z 1, 1028a25-29; Θ 3, 1047a20-24 and 32-35; *GC* I 3, 318b14-17; *PA* I 1, 639a29-b3. There are also many occurrences of this word where it is clearly used in its semantic sense, despite the fact that the name can actually function as a predicate noun of a statement, e.g. *Met.* Γ 2, 1004a29. — Incidentally, Lloyd's interesting discussion (1990, 43-56) of Porphyry's semantics of singular terms and the denotation of individuals is somewhat obscured by his putting relevant passages in a syntactical context of sentence predication where only semantic appellation of individuals is intended. The same goes for his remark (*ibid.*, 47) that "such apparent predications would really be statements of identity".

<sup>35</sup> De Rijk (1980), 22-31; (1988), 4; and my section 2.41.

<sup>36</sup> E.g. *Z* 4, 1030a3-17; and 6, 1031a15-b28. De Rijk (1980), 28-31; (1988), 4-7. As a matter of fact, the entire discussion about the distinction between 'essential and accidental predication' as (supposedly) found in Aristotle, including all its intricacies and pitfalls (see e.g. Bäck 2000, 74-82), proves to be pointless, as far as Aristotle himself is concerned. The same can be said of Leszl's (1975) discussion of 'being per accidens' (212-8), and his view of Aristotle's 'everyday predicative language' (435ff.).

Some other problems are easily solved by taking the verb κατηγορεῖν to simply stand for naming instead of predicating. For example, at *APo.* I 4, 73b16-18, both Ross (522) and Barnes (119) are forced to take the participle τὰ κατηγορούμενα to be used to refer to the subjects the ‘predicates’ are ‘predicated’ of. If we take it as meaning ‘the things named’ or ‘designated by the names in question’, there is no problem at all.<sup>37</sup>

Aristotle’s exposition of the use of quantifiers at *Int.* 7, 17b12-16 affords another example, where on the common interpretation, κατηγορούμενον is misleadingly taken to mean ‘subjects’, since the putatively standard rendering ‘predicate’ will not do. It is perhaps superfluous to say that the neutral sense of ‘naming’ or ‘designating’ is appropriate.<sup>38</sup> In *APo.* II, 13, where Aristotle sets out to provide recipes for finding useful definitions (in fact, definientia) by describing the correct procedure of ‘hunting essential attributes’, the rendering ‘designation’ is likewise the appropriate one. It is on the basis of some obvious semantic presuppositions invested in the present categorization thesis that Jeroen van Rijen has managed to satisfactorily explain, among other things, the coherence and consistency of Aristotle’s views of modality and time as expressed in *Int.* ch. 9 and *Cael.* I, 12, and those on the modal segment of Aristotle’s apodeictic syllogistics, coming to the fore in *APr.* I, chs. 8-12 and *APo.* I, chs. 4-6.<sup>39</sup>

In his Leiden dissertation on ‘prime matter’ in Aristotle, Richard Bemelmans has shown that the notion of an utterly formless matter, which is traditionally ascribed to Aristotle, is mistaken. In his view, with Aristotle the name ὕλη (‘matter’) serves, in a discourse on physical matters (e.g. on generation), to present a thing in virtue of one of its special modes of being, viz. as a ‘that-out-of-which’, regardless of all the other modes of being falling to it. On this interpretation, the putative ‘prime matter’, far from being some mysterious stuff of its own, is nothing but a ‘formal entity’ resulting from our correctly denominating an object, with a view, that is, to precisely that mode of being which is relevant to the special question under discussion.<sup>40</sup>

<sup>37</sup> Van Rijen (1989, 157-82) presents his “new look at *APo.* I, chs. 4-6”, and, generally speaking, his exposition of Aristotle’s view of necessity and theory of (mathematical) abstraction, in light of my categorization thesis. Van Rijen’s study, which also considers Cleary’s view of mathematical objects in Aristotle, *Phronesis* 30 (1985, 13-45), seems to have escaped Cleary’s attention (Cleary, 1995).

<sup>38</sup> De Rijk (1988), 8f. and my present sections 2.41; 4.14.

<sup>39</sup> Van Rijen (1989), 82ff.; 117ff.; 157ff.; 189ff.

<sup>40</sup> Bemelmans (1995), chs V-VII in particular; cf. my sections 12.37-12.39.



The famous question concerning the so-called 'form-matter predication', one of the alleged difficulties pertaining to Aristotle's doctrine of matter and substance,<sup>41</sup> is far less intriguing, to say the least, once we observe that every material thing, including 'matter itself', when singled out as a formal entity, can be named after any of the forms inhering in it.<sup>42</sup> If this is observed the six passages in which 'form-matter predication' is allegedly involved<sup>43</sup> need no longer puzzle us, let alone that there should be any reason to join Page (58, n. 2) in blaming Ross for the fact that "any remark on the locution is conspicuously absent" from his comment *ad loc.*

Boethius too uses the verb 'praedicare' in the sense of naming or designating by some name or expression, regardless of the syntactical role of this word in a statement.<sup>44</sup> To take only one example, from his comments on ch. 7, 17a38ff., Boethius sets out to explain the different uses of the terms found in a statement, the subject terms in particular. These uses, he claims, match the different ways in which a speaker introduces a thing into the discourse. The meaning, then, of the statement depends on the concept that brings up the subject matter in question (*In Periherm.* IIa, 136<sup>1-12</sup>). So the subject term 'omnis homo' is called a case of 'homo' being *predicated*.<sup>45</sup>

Concluding this digression, some general remarks can be made. It may be recalled in the first place that as early as 1925, C.M. Gillespie proffered (81) the hypothesis that the scheme of the categories was built up by an investigation in the Platonic circle, gradually becoming more systematic, into types of names (Gillespie less fortunately speaks of 'predicates') which could be attached to one and the same individual at one and the same time.

The 'one individual-many names' issue comes to the fore with all due clarity in Plato's *Sophist*. Against Antisthenes' idea of 'tautological naming' — not, tautological (statemental) predication, as the

<sup>41</sup> Page (1985), and the studies of R.J. Blackwell, Joseph Owens, Joan Kung, Russell Dancy, and Michael Loux, referred to by Page.

<sup>42</sup> Semantic Main Rules RMA and RSC; my section 1.71.

<sup>43</sup> Page (1985), 58, and many other scholars.

<sup>44</sup> De Rijk (1988), 9-12. See the *Oxford Latin Dictionary* edited by P.W.G. Clare (Oxford 1982), s.v. sub 3, p. 1428, for similar uses in the preclassic period (Plautus, Terentius), and in Cicero, Sallust, Petronius, and Plinius.

<sup>45</sup> "[...] si 'omnis' [...] ad 'hominem' adiungatur, res universalis quae est homo, universaliter praedicatur secundum id quod definitio ei adicitur quantitatis" (IIa, 138<sup>21-23</sup>). For the complete context, and two more passages (II, 142<sup>7-19</sup>; 321<sup>8-15</sup>) see De Rijk (1988), 10-2. Some occurrences of a similar use by Medieval thinkers are discussed *ibid.*, 12-8.

common interpretation runs<sup>46</sup> — it is claimed that when we speak of a man, we assign many names to him other than his essential name: we attribute to him colours and shapes and sizes and defects and good qualities. And so with everything else: we take any given thing as one something, and yet we designate it as many in using a multiplicity of names.<sup>47</sup> Some people who have turned to study late in life (the ‘late-learners’, ὀψιμαθέσι) are given a real roasting by Plato for taking delight in forbidding us to speak of a man as ‘good’ — we must only accord, they claim, the name ‘good’ to a good and the name ‘man’ to a man. Theaetetus, the Eleatic Stranger supposes, often meets with “such fanatics, sometimes elderly men whose poor little minds are thrilled with such discoveries, and who even think they have uncovered here a treasure of perfect wisdom”.<sup>48</sup>

In the *Lexicon*, *Met.* Δ 29, Aristotle joins his Master in rejecting this Antisthenean *parti pris*:

*Met.* Δ 29, 1024b29-36: In a sense there is one account of each thing, viz. the account of its quiddity (ὁ λόγος τοῦ τί ἦν εἶναι); but in a sense there are many, since the thing taken by itself (αὐτὸ) and the very same thing taken together with its property (αὐτὸ πεπονθός) are the same in a sense (ταὐτό); for instance, Socrates and educated Socrates. [...]. Hence Antisthenes was too simple-minded in claiming that nothing could be brought up except by the account proper to it: *one* account to *one* thing. From this the conclusion used to be drawn that there could be no contradiction, and almost that there could be no error. But with regard to each thing, it is possible to bring it up not only by the account which signifies it in its own being (τῷ αὐτοῦ λόγῳ), but also by that of some other thing.<sup>49</sup>

Aristotle’s view on this score is reflected whenever he claims that there is nothing absurd in one and the same thing’s falling under more than one category, that is to say, in designating one and the same thing by categorially different names.<sup>50</sup>

On the issue of naming, Bonitz has a pertinent remark in his *Index aristotelicus*, which is noteworthy indeed. In the light of his (wrong) view of the list of categories as primarily a classification of the things

<sup>46</sup> See De Rijk (1986), 113-7.

<sup>47</sup> Plato, *Sophist* 251A8-B4; De Rijk (1986), 113f. The general role of the ‘one individual-many names’ issue in 4th-cent. semantics is discussed in my present section 2.11.

<sup>48</sup> *Ibid.*, 251B6-C6; De Rijk (1986), 115, where, in the translation, the words “< speak of a man as ‘good’ we must only >” are confusingly missing.

<sup>49</sup> Cf. *Met.* H 3, 1043b28-32, where Aristotle is restating the Antisthenean thesis in his own language, and then rejects it likewise.

<sup>50</sup> E.g. *Cat.* 8, 11a37-38.

there are (τῶν ὄντων), the semantic purport of Bonitz's observation is the more conspicuous:

*Index*, p. 378<sup>5-16</sup>: Extra propositionem logicam κατηγορία est notio vel significatio quae cogitatur nomine aliquo usurpato (B<onitz>z, *Kateg.* p. 621. Steinthal *Geschichte der Sprachwissenschaft* p. 202.) [Bonitz then refers to *Soph. El.* 31, 181b27; *Phys.* II 1, 192b17; *De part. anim.* I 1, 639a30; *Met.* Γ 2, 1004a29; Z 1, 1028a28; Θ 3, 1047a34; *Top.* I 15, 107a3 (cf. a18)]. [...]. Inde κατηγορίαι τοῦ ὄντος sunt diversae notiones quibus nomen τοῦ ὄντος enunciamus.<sup>51</sup>

Finally, there is an interesting passage in *Met.* H 6, where in the context of the various attempts to express the relationship between 'thing' and 'property' ('Is it μέθεξις, or rather συνουσία, σύνθεσις, or σύνδεσμος?'), the idea of substrate, rather than logical subject, is strongly suggested, to say the least:

*Met.* H 6, 1045b7-17: Owing to this aporia [sc. how form and substrate combine into a genuine unity] some speak of 'participation' (μέθεξις), and are confronted with the question what the cause is of participation and what precisely it is to participate. Others speak of communion (συνουσία) [...]. And others again speak of life (τὸ ζῆν) as a composition (σύνθεσις) or connection (σύνδεσμος) of soul with body. Yet *the same applies to all cases*; for being healthy too will be either a 'communion' or a 'connection' or a 'composition' of soul and health, and being a bronzen triangle a combination of bronze and triangle, and being white a combination of surface and whiteness.

Aristotle ascribes these diverse designations to people's looking for a unifying formula conveying the union of what in fact is potential and actual being, and, accordingly, argues for explaining the combinations, instead of using such designations — which all suggest the presence of a third 'agent', so to speak — in terms of these two metaphysical principles. No better way, he must have thought, to escape any Platonist idea or flavour.

#### 4. 2 On naming. Names and the things named (*Cat.*, chs. 1-3)

As we have seen before, the categories are (the highest types of) names taken in their capacity of signifying 'things' (where 'things' is

<sup>51</sup> Ebbsen (1987, 295-7) clearly points out the basic assumptions needed for an interpretation of *Cat.* in terms of a primary object language, but seems to ascribe the fact that Porphyry abstained from bringing up statemental assumptions merely to the introductory character of Porphyry's work. Instead, it underlines, I take it, Porphyry's semantic approach to the matter.

used as a blanket-term for items in any category). The first three chapters of *Cat.* are devoted to assessing the semantic and inferential relationships existing between names and their referents.

#### 4. 21 *Homonymy. Synonymy and Paronymy*

First, the things named ('referents') divide into homonymous, synonymous, and paronymous referents, where the principle of division is the different use of a name. Sometimes they are used in such a way that the account of being which is conveyed by the name (ὁ κατὰ τοῦνομα λόγος τῆς οὐσίας) is the same (the 'things' signified by the name are synonymous, then); sometimes this account is different (in the case of homonymous things); sometimes the account of being is approximately (παρά) the same (the things are paronymous, then). Synonymous things share the name's logical content or significate (its "account of being"), which means that, from the intensional point of view, the things named partake in the same universal (or, taken extensionally, are members of the same class). Homonymous things partake in different universals and are members of different classes.

What should we think of paronymous things? Ackrill (72) rightly remarks on 1a12ff. that 'paronymous' is obviously not a label co-ordinate with the other two.<sup>52</sup> In fact, unlike 'synonymous' and 'homonymous', the label 'paronymous' is not used comparatistically, to qualify a relationship between two or more things (which are 'synonymous'). It instead serves to indicate that in the case of a paronymous thing, the account of being signified by the name does not apply to it properly, but 'from beside' (παρά). That is to say, if something is brought up paronymously, by calling it e.g. 'grammarian' or 'pale <thing>',<sup>53</sup> it shares the account of being ("grammatical' or 'paleness') expressed by the name only 'from beside', in that the designation (προσηγορία) having a different ending (1a12-13) primarily refers not to this account of being as such, but qua enmattered in some subsistent thing, and, by the same token, to this subsistent thing qua possessing this mode of being.<sup>54</sup> Thus though e.g. the blacks and the whites may be regarded as paronymous

<sup>52</sup> From the viewpoint of Platonic metaphysics, however, paronymy perfectly matches synonymy and homonymy. See also my section 4.72.

<sup>53</sup> For this 'make-weight' required by English idiom; see my *Index* s.v. 'thing'.

<sup>54</sup> See the semantic Main Rule, RMA; my section 1.71.

entities, they are so by themselves, not with reference to some other one thing, since both names refer to subsistent things which are not straightforwardly blackness or whiteness, but 'something from beside', viz. something affected by such a property.<sup>55</sup>

Thus the significate ('semantic value') of names is in the focus of interest in chapter 1, the prefixes 'syn-', 'para-', and 'homo-' referring to the different relationships the referents have to the significates conveyed by the original names. No doubt, by the same token, things are, secondarily, classified. But the principle of division is semantic and, rather than any classification, the things *being called so-and-so* from something else (ἀπό τινος), whether synonymously, paronymously or homonymously, is the focal point in the *Categories*.<sup>56</sup>

#### 4. 22 *The semantic diagram*

In chapter 2 (1a20-b9), a fourfold classification of 'things' is given; but, once again, the things are taken in their capacity of being 'things named' (referents). This line of approach is clearly announced by the introductory lines, 1a16-19, in which the notion of συμπλοκή is pivotal to explain the precise way in which, in so far as they are the subject matter of *Cat.*, the things named are brought up. I have discussed συμπλοκή in my section 2.3.

Ackrill's remark (75) that this is a classification of things, not names, could put the reader on the wrong track. The same applies to a greater extent even to Oehler's speaking of "vier paarweise elementfremde Klassen des Seienden" (179). Ackrill's (75f.) accusing Aristotle of being careless should be judged from the same perspective. From the modern point of view, you may say that Aristotle "should have said that white is in a subject and its name is predicated of the subject". However, what he actually says at 1a27-29 (as at 2a31-34) is not "a mere slip" (75), since the opposition is not between the white *thing* being in a substrate and the *name* 'white' said of the substrate, but between that which is given *qua being signified* by the name and the name *qua signifying* this, the only difference being that the latter is always universally applicable, while the former is not.<sup>57</sup>

<sup>55</sup> Paronymy is also discussed at ch. 7, 6b12-14 and 8, 10a27-b11.

<sup>56</sup> Ackrill, 72f.; Oehler (1984), 158-77.

<sup>57</sup> De Rijk (1978), 93; (1980), 35; 44f.; see also the semantic Main Rules, RMA and RSC (section 1.71). Of course, the reduction of the things (τὰ ὄντα at 1a20ff.), in the context of the so-called "linguistic turn", to just linguistic items is equally to be cast aside; cf. Oehler (1984), 187f.

Significantly, the ‘things-there-are’ (τὰ ὄντα) are divided according to their being referred to by names (notice the use of λέγεται at 1a20, 22, 24, 27, 29; 1b1, 2, 4, 6, 7), and, in contradistinction, the corresponding, diverse ways of their being are given (see ἐστίν at 1a21, 22, 23, 26, 28; 1b 1, 2, 3, 5, 8 (εἶναι), 9). However, this is as such nothing to do with the diverse ways of statement-making, since in the contexts at issue the author is only interested in formal relationships between names and referents; putting it otherwise, just as the ἐστίν is meant to indicate a real state of affairs, the λέγεται has the sense of ‘being said truly’, as is also the case with the κατηγορεῖσθαι in chapter 3.

The division as presented in 1a20ff. leads to the following semantic diagram arranging ‘things’ qua referents of names:

(1) 1a20-22: things which are brought up as applying to a substrate, but not inhering in any substrate; e.g. when an individual man is the referent of ‘man’.

(2) 1a23-29: things which are brought up as inhering in a substrate,<sup>58</sup> but do not apply to any substrate; e.g. the referent of ‘knowledge’ is an individual piece of knowledge-of-grammar, which usually is in a soul as substrate, but is, qua individual entity, not said of any substrate; or when there is talk of an individual pale (‘paleness’ or ‘being pale’, say, of Socrates), which must be found in a body as substrate (“for all colour is in a body”; 1a28), but is, in its capacity of *individual* entity, not said of any substrate, i.e. not ‘universally applicable’.<sup>59</sup>

(3) 1a29-b3: things which are brought up as applying to a substrate and also as inhering in a substrate; e.g. when the generic name ‘knowledge’ is used to stand for any (piece of) knowledge, which, as belonging to a non-substantial category, must inhere in its proper substrate, the soul.

(4) 1b3-6: things which, qua being brought up as individual substances, are by definition neither said to inhere in a substrate nor said of a substrate; e.g. when the name’s referent is an individual man or an individual horse, for nothing of this sort can possibly be either in a substrate or said of a substrate.

The last classification is followed by a warning against a possible confusion (1b6-9): “Things that are individual and numerically one

<sup>58</sup> The phrase ἐν ὑποκειμένῳ is defined (1a24-25): “By ‘in a substrate’ I mean what is in something, not as a part, and cannot exist separately from what it is in”. Modern controversies about this notion are dealt with in Oehler (1984), 180-8.

<sup>59</sup> For ‘individual property’ see my sections 9.63; 10.71 of Vol. II.

are, without exception, not said of any substrate, but there is nothing to prevent some of them from inhering in a substrate; for instance (γάρ), the individual knowledge-of-grammar belongs to the class of things inhering in a substrate”.

#### 4. 23 *The notion of ὑποκείσθαι (ὑποκείμενον)*

In his *Index*, Bonitz mentions (797b23ff.) as one of the senses of the participle ὑποκείμενον ‘logical subject which predicates are attributed to’. However, the notion of ὑποκείσθαι always conveys the ontic relationship of ‘providing something non-subsistent the possibility of being there’, and so does the participle ὑποκείμενον.<sup>60</sup>

This suggests that we should not interpret the phrase καθ’ ὑποκειμένου λέγεσθαι in terms of sentence predication and dyadic statement-making (such as in ‘Socrates is wise’), but to take it to mean ‘to be attributed monadically to a substrate’, such as in ‘wise Socrates’ or the assertible ‘Socrates’s being wise’. Consequently, ‘to be said of’ implies the ontic relationship of non-subsistence, or being dependent upon something subsistent (viz. its substrate) to have real existence. Thus the feature of ‘being said of’ logico-grammatically matches the ontic property of ‘being in a substrate’ (ἐν ὑποκειμένῳ εἶναι); the only difference between the two notions is that the (individual) ontic property qua being said of is being taken as (in principle) universally assignable to other substrates.

The question may now come up why Aristotle’s semantic diagram mainly focusses on the logical properties of ‘being said of’ and ‘not being said of’. To solve this problem we should consider the proper nature of the categories and the intention of *Cat.*, as well as the use the author makes of the list of categories in his other works.

<sup>60</sup> Bemelmans (1995), 122; 161, n. 4; See also Kahn (1973), 46-8; Ebert (1985), 119. Lloyd’s (1956, 65) taking the phrase ἐν ὑποκειμένῳ ὄν to reflect as much a logical as a metaphysical notion of substrate, whereas καθ’ ὑποκειμένου should be “a purely logical phrase”, is rather confusing and also contradicted by himself, when he says (154) that the former phrase is metaphysical and bears on properties, the latter a logical one concerned with predicates. He seems to ignore the inadequacy of any sharp distinction between the logical and ontological areas (see De Rijk, 1952, 4; 1978, 88), and, particularly, to be unaware (as, admittedly, also De Rijk, *loc. cit.* and Bemelmans, 161, n. 4, are) that the ‘logical’ use meant here is that of *appositively* assigning a (nominal or verbal) attribute to a substrate, as a result of which an assertible is formed, which may serve as the basic ingredient of the monadic argument of the assertoric operator ‘is’. In a word, the logical act involved in ‘being said of’ is that of appositively assigning to a substrate, not of predicating with the help of the copula ‘is’. See my sections 1.51; 2.13-2.16.

Generally speaking, the use of different categories is intended *to bring up* things that are (ὄντα) according to their diverse modes of being, so that a thing's different categorial names bring it up in capacities which may each be formally distinguished in one and the same thing. In other words, it is the diverse formal distinctions that are in the focus of Aristotle's attention, since these formal distinctions to be made about one and the same thing are decisive in order to acquire insight into its proper nature and to describe it appropriately, in accordance with the particular ontic aspect one has in mind for the sake of a special discussion or proof about it.<sup>61</sup>

#### 4. 24 *The purport of the semantic diagram*

In the last few decades, the purport of the classification of the 'things named' has been the subject of eager debate, particularly the status of individual being in Aristotle. With regard to the latter, there are divergent opinions as to what should be made of the inseparability requirement concerning non-substantial individuals, that is to say that individuals like whiteness or knowledge must be in their proper substrates, body and soul, respectively.

The common view, rightly argued for by Ackrill<sup>62</sup> in the wake of the Greek commentators, is that the inseparability requirement should be understood in the following way. When we talk about, say, pale Socrates, Aristotle's claim that the name 'pale' refers to his individual paleness, which cannot be something subsistent but must inhere in Socrates, does not imply, of course, that the property of paleness can only inhere in Socrates. What he means is that (a) the existence of Socrates's individual paleness is dependent on Socrates's body, and (b) this is so because the property of paleness can only occur by inhering in a body.

In his short study on 'Inherence', G.E.L. Owen rejects the common view, and even speaks of the dogma held by the commentators to the effect that a particular property cannot be found in more than one subject.<sup>63</sup> He seems to assume that if paleness is found in two

<sup>61</sup> See my sections 2.6-2.7.

<sup>62</sup> Ackrill, 74-6; cf. Heinaman (1981), 295-307.

<sup>63</sup> Owen (1965), 99; (1986), 254: "To say that pink is a particular colour [...] is not to say that it cannot be found in more than one subject. Any particular shade of colour is of course reproducible. [...] Aristotle does not for a moment contemplate denying this. His commentators saddle him with the denial, and this is the dogma I set out to examine".



individuals, say, Socrates and Plato, it is Socrates's individual property of paleness that applies to Plato as well. Frede, too, rejected<sup>64</sup> the common view that properties should be individualized by their inherence in an individual substrate, and claimed that a universal property can have an individual substrate. On this interpretation, Frede was forced to concede that individual properties can be shared by more than one substrate.

Both Owen and Frede were led astray, it seems, by taking Aristotle to be speaking of sentence predication. Frede was even quite explicit on this score: he argued that in so far as individual properties are taken as individualized by their individual substrates, they cannot possibly be the subject of regular predication; e.g. when we say 'Socrates is wise', the same property is predicated as in 'Plato is wise'. However, it is not statement-making and sentence predication Aristotle is dealing with, but merely our use of names and the diverse ways in which they stand for their referents. For instance, speaking semantically, the universal name 'wise' — which, as we have seen before,<sup>65</sup> must be taken as (to refer to) 'being wise' — may refer to Socrates's individual condition of being wise, as well as to a similar individual condition in any other individual. From the ontological point of view, the 'universal' property of 'being wise' is individualized by its inherence in this or that individual (my section 10.72).

The best way to approach Aristotle's account of the reference of universal names is by considering it in light of his opposition to Plato's metaphysics of transcendent Forms. The inseparability requirement held by Aristotle is meant to safeguard the basic tenet that there is no wisdom ('being wise') other than the wisdom instanced in individual substrates in the outside world. That the individual occurrences of '(being) wise' are numerically different does not rule out the possibility of assigning one and the same universal *name* 'wise' to any of its instances. However, contrary to Plato, Aristotle does not believe that our use of universal names should require a universal Entity, 'Being Wise', existing separately from its being enmattered ('instantiated') in particulars. What the semantic diagram is intended to elucidate is that our diverse ways of applying names to one and the same thing are bound to produce different types of referents or

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<sup>64</sup> (1978), 17ff.; (1987), 58ff. See, however, his (and Patzig's) commentary on *Met. Z.*

<sup>65</sup> To Aristotle, any appellative name and adjectival verb include 'connotative being'; see my section 1.64.

'things qua named'. In chapter 2, the relationships between the different 'things named' are explained in terms of the ontological status of the things under examination, not as existing in the outside world regardless of our taking them into consideration, but precisely in so far as they are conceived of and brought up by the names used.

#### 4. 25 *The transitivity rule. Metalepsis*

Chapter 3 is in keeping with the previous discussion in that it deals with the substitutability of names by other names or phrases. It is claimed (1b10-12) that when a name<sup>66</sup> is said of (κατηγορεῖσθαι) some 'thing', [x], whatever is said of that which is conveyed by this name will be said of [x], too. For instance, the name 'man' is correctly used of an individual human being, say, Socrates, as likewise 'animal' is said of 'man'. So it is also correct to assign the name 'animal' to Socrates. This is plainly true, for the individual man is both a man and an animal (1b12-15).

In the previous passage, the instances were confined to the line directly ascending from species to genus. The subsequent lines concern the differentiae constitutive<sup>67</sup> of 'specification'. Here it is necessary to distinguish between subordinate and non-subordinate genera. As far as names (of differentiae) used to stand for differentiae occurring in different categories and, accordingly, not belonging to subordinate genera are concerned, name substitution is out of the question, e.g. if you were to step over from the differentia 'being sharp' said of a cry ('shrill') to 'being sharp' said of a knife, or of an angle, or cheese ('pungent'), or an image ('distinct'). When it comes to subordinate genera, on the other hand, differentiae can be shared by them, so that name substitution can correctly take place.

Considering the fact that the chapter under discussion is concerned with naming, not statement-making, Ackrill's critical remark (76) that it does not occur to Aristotle that 'man' functions

<sup>66</sup> The words ὄνομα and προσηγορία are loosely used in *Cat.* to stand for any nominal or verbal designation; Oehler (1984), 168.

<sup>67</sup> Ackrill's (77) accusing Aristotle of committing a howler at 1b22-24 turns out to lack good grounds if one takes the differentiae to be *differentiae constitutivae*, since there is no talk about the division of a higher genus, but of the constitution of a lower genus or species, including the *infima species*. And this is because Aristotle deals with the *names* by means of which things may be brought up, since these names are significative of one or more *constituents* of these things; De Rijk (1980), 36f.

differently in 'Socrates is (a) man' and '(a) man is an animal' is beside the mark, for reasons similar to those we have put forward on account of misconceptions about the purport of the semantic diagram. Moreover, while Ackrill correctly states that the chapter deals with the transitivity of the 'said of' relation with regard to genera and species, his failure to see that the focus is on naming, not sentence predication, leads him to the mistaken view that Aristotle does not distinguish between the transitivity relation of an individual to its species or genus and that of a species to its genus.<sup>68</sup>

The subject matter of this chapter is often associated with syllogistics as expounded in the *APr.*<sup>69</sup> No doubt, there are connections. However, it seems preferable to take the chapter as dealing with name substitution for the sake of disputation in general. Ackrill (76f.) aptly refers to *Top.* I 15, 107b19-26, where the procedure of name substitution is applied to discovering ambiguity. Since the differentiae of non-subordinate genera are also specifically different, e.g. those of 'animal' and 'knowledge', Aristotle argues, you must see whether that which falls under the same name are differentiae of non-subordinate genera, e.g. 'sharp' as applied to a musical note and to a solid body. This is the way to disclose ambiguous uses of names, in which casename-substitution is not allowed, and thus unmask wrong reasoning.

Elsewhere in *Top.* we will come across an even more explicit version of this procedure, where it is labelled *μετάληψις*. At *Top.* II 5, 112a16-21, Aristotle addresses the phenomenon of pregnant speech. Whoever has said anything whatsoever (*ὅτιοῦν*) has in a certain way said many things, because each expression necessarily involves a number of sequels. For instance, he who has said that there is a man, has also said, by implication, that there is an animal, and an animate entity, and a biped, and something that is receptive of insight and

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<sup>68</sup> Bäck's worries (2000, 236-9) about the transitivity rule ('antepredicamental rule') will readily disappear once the idea of sentence predication has been abandoned. At *APo.* I 4, 73a28-33 too, the transitivity rule functions in the context of naming, rather than sentence predication. The same goes for Porphyry's remark about this rule at CAG IV-1, p. 7<sup>10-12</sup>: *εἰ γὰρ ἀληθὲς τὸ τὸν Σωκράτην εἰπεῖν ἄνθρωπον, τὸν δὲ ἄνθρωπον ζῶον, τὸ δὲ ζῶον οὐσίαν, ἀληθὲς καὶ τὸν Σωκράτην ζῶον εἰπεῖν καὶ οὐσίαν.*

<sup>69</sup> E.g. Oehler (1984), 191-3. Aristotelian *μετάληψις* rather resembles 'semantic entailment' as it is understood nowadays, such as in '[x] has been murdered, therefore [x] is dead' (Seuren 1998, 300-3; 305), rather than 'logical entailment' based on the formal pattern of the entailing expression, like in 'Every [x] is [y], therefore some [x] is [y]'.

knowledge.<sup>70</sup> To know this may be of interest in a dispute, since once any single one of these sequels, no matter which one, has been overthrown, what has initially been said is demolished as well. In the next lines (112a21-23), the discussants are warned against the possibly bad outcome of 'exchange' (μετάληψις), for sometimes a sequel is more easily destroyed.

In *Top.* VI 11, where rules are given for the definition of complex terms (συμπεπλεγμένα), a mistake is discussed (149a5-28) that consists in substituting a less intelligible name for a more usual one, such as the poetic phrase 'glistening mortal' for 'white man'. We should also avoid inadequate substitutions, like the ones in which less familiar names or phrases expressing differentiae are substituted for more familiar names as genera usually are. It might be held that this criticism is ridiculous, Aristotle advances, for why should the differentia not be the more intelligible one? If, however, someone substitutes a phrase, not another single name, clearly it is of the differentia, not the genus, that an explanatory formula should be given; for the differentia is less familiar than the genus. In all such cases, it is primarily name-substitution that is in order, as is also plain from the use of the verb μεταλαμβάνειν ('exchange', 'substitute'). In *Top.* V 11, where the mistake of using the same name more than once in describing a property is dealt with (130a29-b5), one of its possible occurrences is when a single name is replaced by a phrase containing the repetition of a name previously used. For instance (130a38-b5), if one were to assign to earth the property of 'being the substance which of all bodies is most inclined by its nature to be carried downwards' and thinks it appropriate to substitute the phrase 'substances of a certain kind' for 'bodies'.

Other occurrences of the verb μεταλαμβάνειν are found at *Top.* II 4, 111a8; VI 4, 142b3; 9, 147b14; 11, 149a4; 12, 149a33, where the procedure of 'exchange' is applied to clear up less familiar notions, or to detect mistakes in definition. In *APr.*, too, the procedure of exchanging names is applied and discussed, e.g. in the case of certain hypothetical syllogisms, to wit, the syllogisms κατὰ μετάληψιν (at *APr.* I 29, 45b15-20; cf. 23, 41a37-b1). At *APr.* I 39, the procedure of substituting names for names, phrases for phrases or a combination of name and phrase (whereby names should always be preferred to phrases) is discussed with reference to the 'setting out' of terms

<sup>70</sup> Cf. *APo.* I 4, 73a29-31.

(ἔκθεσις). At I 34, 48a8-12 and 24-28, it is paronymous names that are mutually exchanged.

In chapter 11 of Book II of *APo.*, where Aristotle argues that each of the four kinds of cause can be exhibited<sup>71</sup> through a 'middle', he also comes to speak of exchanging causal definientia (94b21-22: δεῖ δὲ μεταλαμβάνειν τοὺς λόγους), e.g. in the argument concerning health as the final cause of walking after dinner. If we assume, Aristotle says, that walking after dinner has the property of promoting normal digestion,<sup>72</sup> and that the latter is conducive to being healthy, we may say that 'having normal digestion' is assignable to 'walking after dinner', and 'being healthy' to 'having normal digestion', so that the final cause, 'being healthy' inheres in 'walking after dinner' through the efficient cause, 'having normal digestion'. But since 'being healthy' is the final cause of 'having normal digestion', just as 'having normal digestion' is the efficient cause of 'being healthy', the latter is also a sort of definient of the former. In order to clear up the argument, then, Aristotle proposes to exchange these two and now prove the inherence of 'having normal digestion' in 'walking after dinner' through 'being healthy'.

The same procedure is practised in Aristotle's other works. For instance, in his early work, *EE* at I 6, 1216b32-36, the procedure of semantic substitution seems to be used not with regard to names or phrases, but assertibles (modern 'dictums' or 'that-clauses') in their capacity of being 'cognitive contents'. In this passage, Aristotle recommends that when we advance true but somewhat obscure arguments, we should always exchange the usually confused assertibles by clearer ones, in order to arrive at a more representative kind of knowledge.<sup>73</sup>

Returning now to *Cat.*, ch. 3, the transitivity rules briefly presented there are at the very basis of the Aristotelian theory of argumentation, including the epistemonical arguments dealt with in *APo.*, as well as the dialectical ones of the *Topics*.<sup>74</sup>

<sup>71</sup> By rendering (65; 214) δεικνύναι 'to prove' Barnes fails to recognize Aristotle's pivotal distinction between 'exhibiting' (δεικνύναι) and 'proving' (ἀποδεικνύναι). See my section 6.54.

<sup>72</sup> The Greek text has "the property of preventing food from rising to the orifice of the stomach" (94b14-15).

<sup>73</sup> Μετάληψις is also discussed in Whitaker (1996), 204-8, and its use in *Topics* in De Pater (1965), 226f; my section 4.25.

<sup>74</sup> The rule is applied more than once in *Cat.*, ch. 5.

4. 3 *The ten categories listed*

The key concept of chapter 4 is ‘combination’ (συνπλοκή)<sup>75</sup> in so far as the ten categories are listed as bearing on our use of ‘uncombined’ names. The uncombined names are meant to bring up something under one single aspect of being, and not as joined to what is sometimes called ‘something added’ in order to frame an expression with a truth-value. Three items deserve our special attention: viz. Aristotle’s use of the word συνπλοκή, his assessment of κατηγορία in the context of the notion ‘to be said without (any) combination’, and the basic role of ‘categorization’.

4. 31 *Things brought up ‘without any combination’* (κατὰ μηδεμίαν συνπλοκήν)

When Aristotle uses the phrase ‘things said without combination’ (1a16-17), what does he mean by ‘combination’ (συνπλοκή)? As for the origin of this technical term (literally ‘inter-weaving’), one is usually referred to Plato, *Sophist* 259E5-6; 262 A-B, where it is claimed that a λόγος is not just a series of ὀνόματα and ῥήματα, but results from the combination of an onoma with a rhema to produce a harmonious compound.<sup>76</sup> As is commonly recognized, the Platonic line of thought reappears in Aristotle’s view of λόγος in *Int.*, but, unfortunately enough, this identification has led to the mistake of interpreting both the Platonic and the Aristotelian λόγος as a statement of the ‘S is P’ type. As far as Plato is concerned, I have argued earlier that we should take the λόγος to be a monadic ‘assertible’ ranged over by the assertoric operator ‘is’, from which a λόγος εἰρημένος or assertion is framed.<sup>77</sup> Likewise, the Aristotelian λόγος and λόγος ἀποφαντικός should be interpreted in terms of monadic statement-making: ‘Is (Is not): [assertible]’.

Along the same lines, the combination under discussion should not be understood, as is commonly the case,<sup>78</sup> in terms of dyadic

<sup>75</sup> This term and kindred ones are discussed in my section 2.3.

<sup>76</sup> The ‘communion of forms’ is extensively discussed in De Rijk (1986), 122-34; 138-63; 187-94; 327-30.

<sup>77</sup> De Rijk (1986), 305-16; cf. 196-202; 272; 279-82. The expression λόγος εἰρημένος is found at *Theaet.* 190A5.

<sup>78</sup> In the discussions in De Rijk (1978), (1980) too, the ‘S = P’ construal still plays a part in the background of the discussions, unfortunately enough. The same holds for Oehler, who paraphrases (1982, 203) the expression ‘without any

statement-making, using two separate terms to be connected by the copula 'is'. What is meant is either (a) the combination of a name with a nominal or verbal attribute taken from different categories to make up an 'assertible', or (b) the combination of an assertible with an assertoric operator to make up a fully-fledged assertion. Accordingly, the phrase 'without any combination' (κατὰ μηδεμίαν συμπλοκήν) bears on the absence of any statemental aspect, both the framing of an assertible and *a fortiori* that of an assertion.<sup>79</sup> The items addressed as 'categories' thus all concern what is later called 'simple apprehension', i.e. the grasp of a concept from one single category.<sup>80</sup>

That 'combination' should not be exclusively understood in terms of statement-making can also be gathered from what Aristotle says about phrases such as 'in the Lyceum' and 'in the market-place'. These are said to lack combination (2a1), whereas 'pale man' or 'big stone' are identified as 'things with combination'. Ackrill is right in asking (73f.) what precisely the necessary and sufficient condition for an expression to be 'without combination' would be. He suggests two possible answers. Either (a) the expression should signify just one item in some category, or (b) the device 'with (or without any) combination' is purely linguistic. The second suggestion is not convincing and can safely be dismissed.<sup>81</sup>

On the first suggestion, the examples in chapter 2, 1a16-19 are, Ackrill complains, misleadingly selective, since on this criterion, a single word could be an expression involving combination, while a group of words could be one without combination. Ackrill rightly takes the phrase 'without combination' to stand for both 'not surpassing some one category' and 'not making up together an assertion'. He seems to be wrong, however, in explaining Aristotle's examples in terms of indicative sentences of the anachronistic 'S is P' type as opposed to compound expressions like 'white man'. Ackrill's problem disappears if we leave any idea of dyadic statement-making aside, and apprehend Aristotle's examples in terms of the opposition between assertibles and assertions as coming to the fore in monadic

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combination' by "nicht in einem Satzkontext".

<sup>79</sup> I.e. not only statement-making, but the framing of an assertible as well. Therefore Moravcsik's (1967, 127ff.) insisting on the statemental aspect (by identifying the categories with potential sentence elements) is bound to obscure the picture.

<sup>80</sup> *Cat.* 4, 1b25-2a4; Ackrill, 73.

<sup>81</sup> Moravcsik (1967), 133f.; De Rijk (1980), 4.

statement-making.<sup>82</sup> So it seems preferable to take the phrase κατὰ μηδεμίαν συμπλοκήν to rule out any assertible formation (λόγος), and *a fortiori* any statement-making. On this assumption, the notion 'without combination' is primarily meant to exclude any conceptual transition from one category to another. So the view presented in *Cat.* is well in keeping with what is said in *Int.*<sup>83</sup> Moreover, and this has not been duly observed so far — the emphatic use of μηδεμίαν ('without *any* combination') is now more easily explained: what it intends to rule out is not only actual assertion but also the previous formation of an assertible complex or assertible.<sup>84</sup>

#### 4. 32 Κατηγορία, κατηγορεῖν, and categorization

Aristotle was the first to use the word κατηγορία as a technical term. Frede (1987, 33-35) may be right in taking the word primarily as a verbal noun (*nomen actionis*) indicating the act of assigning some attribute to something else. However, any association with dyadic statement-making, as is assumed by most interpreters, including Frede, is confusing. The same goes for the rendering 'predicate' or 'predication', unless it is loosely used in the sense of name ('naming') or appellation and designation.<sup>85</sup> In other words, the use of different κατηγορίαι occurs, as such, on the onomastic, not the apophantic level.<sup>86</sup>

<sup>82</sup> De Rijk (1988), 2f.; sections 2.12-2.16 of the present work.

<sup>83</sup> My sections 2.31 and 4.85.

<sup>84</sup> The difference between actually asserting and merely framing an assertible complex will be briefly discussed at ch. 10, 12b5-16; for its significance see my sections 2.16; 3.66.

<sup>85</sup> In English 'appellation' and 'designation' have a similar ambivalent use as has κατηγορία, to indiscriminately stand for the verbal noun and the act's product.

<sup>86</sup> For this distinction see my section 2.2. In Plato, too, the focus is on naming, not sentence predication; see De Rijk (1986), 305-26, and *passim* (See *Index of Terms*, s.v. Name and Predication). It is noticeable that Ebert (1985, 136, n. 36; cf. 114) recognizes that 'predicates' may be used to refer to subjects, which comes close to taking the categories primarily as names; this is rightly connected (131, n. 32) with the basic meaning of σημαίνειν, which is used for extra-propositional expressions as well. The same goes for his being aware (e.g. *ibid.*, 122f.) that 'definition' should be understood as 'definiens'. However, Ebert's retaining the idea of their primarily propositional use prevents him from considering the categories primarily in the context of semantics. See also his pertinent remark (*ibid.*) about Aristotle's use of the verb λέγειν, which, in Ebert's view, unlike σημαίνειν, throughout the *Categories* connotes sentence predication. However, nothing prevents us from occasionally taking λέγειν in the sense of 'to call [x] an F'.



What Aristotle has in mind in his *Categories* is to make clear that whenever we bring up things of the outside world for discussion, we have in principle a choice between ten different ways of addressing them, each one of which corresponds to one of their different modes of being. What is behind this division is the general idea that every inhabitant of the outside world is a *rendez-vous* of some subsistent mode of being, making it a *ὑποκείμενον* of a certain natural kind, *plus* a gamut of coincidental modes of being; whereas the subsistent mode can be differentiated into a number of generic essential modes.<sup>87</sup> Whenever one uses one of the ten types of naming, one focusses on one of these modes of being, in accordance with the objective of the discussion at hand. Accordingly, the λεγόμενα of chapters 2 and 4 are what is called κατηγορούμενα elsewhere in the treatise. This procedure of categorization, which forms the basis of our framing of statements with a specific end, plays an important role throughout Aristotle's works. Each time it is a special mode of being possessed by the object under examination that is in the focus of the case of naming involved.

The list of the categories should therefore be read in terms of the distinction between several modes of being,<sup>88</sup> provided, however, they are brought up by various categorial names. Notice the easy transition from 'thing named' to 'thing *qua* named' and 'expression *qua* naming things':<sup>89</sup>

*Cat.* 4, 1b25-2a4: Of things brought up <by expressions> without any combination, each <expression> signifies either <the thing's> substantial mode of being (οὐσίαν), or its quantitative mode of being (ποσόν), or qualitative (ποιόν) or relational (πρός τι) mode of being, or its being somewhere (πού) or being at some time (ποτέ) or being-in-a-position (κεῖσθαι) or being-in-a-state (ἔχειν)<sup>90</sup> or being active (ποιεῖν) or being affected (πάσχειν). To give a rough idea, examples of the substantial mode of being are man and horse; of quantitative being: being four-foot, five-foot; of qualitative being: being white, or being a grammarian;<sup>91</sup> of relational being: being double of, being a

<sup>87</sup> This does not mean, of course, that the ousia in fact should consist of a plurality of subsistencies: the generic essential modes of being do not affect the thing's essential unity. That the distinction was sometimes taken to correspond to ontologically distinct modes of being in the Middle Ages gave rise to the famous controversy 'De pluralitate formarum'.

<sup>88</sup> For connotative being included in any onoma and rhema see my section 1.64.

<sup>89</sup> See the semantic Main Rules RMA and RSC discussed in my section 1.71.

<sup>90</sup> For this sense of ἔχειν see my section 4.9.

<sup>91</sup> Ackrill (78) wrongly seems to take γραμματικόν (at 1b29) not to convey a

half of, being larger than; of being somewhere: being in the Lyceum, or in the market-place; of being at some time: being yesterday, being last year; of being-in-a-position: being in a recumbent position, being seated; of being-in-a-state: being shod ('having-shoes-on') or being armoured; of being active: cutting, burning; of being affected: being cut, being burned.<sup>92</sup>

In the last paragraph of this chapter, Aristotle warns the reader that in order to assert something about the things signified by non-complex terms, such as 'man', 'the pale', 'runs', 'wins', a *συμπλοκή* is required. It is clear that Aristotle does not have combinations like 'pale man' in mind, but the combination effected by adding the assertoric operator *ἔστι* regardless of whether it is used explicitly or included in an adjectival verb. So this passage is about the important feature of isolated 'names' ('designations') that they as such lack existential import. Notice that there is no mention of denial (*ἀπόφασις*),<sup>93</sup> and also that *κατάφασις* is used to stand for 'affirmative assertion', not 'affirmative assertible':

*Ibid.* 4, 2a4-10: In any affirmation one of the above items is brought in just by itself; by the combination of these with one another an affirmation is produced. For every affirmation, it seems, is either true or false; but of things said without any combination none is either true or false, e.g. 'man', 'the pale', 'runs', 'wins'.

#### 4. 4 *On the protagonist of the list, οὐσία*

In the next chapter, the protagonist of the list, οὐσία is extensively discussed, including its special properties.

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mode of qualitative being. But to Aristotle, it does, since 'grammarian', 'butcher' etc. are not species of 'man' (otherwise 'man' would be a genus). They all refer to coincidental qualities differentiating the immanent species 'man'.

<sup>92</sup> A list of categories is also found elsewhere in Aristotle. The complete one only features in *Cat.* 4, and *Top.* I 9, 103b21-23. Incomplete lists are found (a) eight in *APo.* I 22, 83a21-23 and b15-17; *Met.* Δ 7, 1017a25-27; (b) seven in *Phys.* V 1, 225b5-9; 2, 226a23-25, and *Met.* K 12, 1068a8-10 and b15-17; (c) six in *Met.* Z 4, 1029b23-25; *EN* I 4, 1096a19-20; *EE* I 8, 1217b26-28; (d) five in *Phys.* I 7, 190a32-36; *Met.* E 2, 1026a36-38; *Rhet.* II 7, 1385b5-7; (e) four in *Met.* Z 7, 1032a15; Λ 2, 1069b9-10; *GC* I 3, 317b8-10; [*MM* II 7, 1205a9-11]. The great many places where only three categories (οὐσία, ποιόν, ποσόν or πρὸς τι) are enumerated, the phrase 'and the other ones' is added; see Bonitz, *Index*, 378,60-379,11.

<sup>93</sup> Minio-Paluello seems to be right in rejecting (with Ammonius, who appeals to "the best text witnesses") the readings *ἢ ἀποφάσει* (at 2a6) and *ἢ ἀπόφασις* (at 2a7, twice), which are found in our manuscripts, including the Ambrosianus and Marcianus.

4. 41 *Primary and secondary οὐσία. Sequels of this way of naming*

First, the notion of οὐσία is assessed along the lines of the above-mentioned semantic diagram. This results in distinguishing between primary and secondary ousia, one matching item (4), the other item (1) of the diagram:

*Cat.* 5, 2a11-19: Ousia — in the strictest, primary, and most basic sense — is the one which is neither said of a substrate nor in a substrate; for instance, the individual man or the individual horse. The species in which the ousiai primarily called ousiai are found are called secondary ousiai, as also are the genera of these species. E.g. the individual man is found in the species man and animal is a genus of the species; so these — both man and animal — are called secondary substances.

The core of these opening lines is to make clear that, whenever a thing of the outside world is brought up qua ousia, i.e. whenever it is designated by the name that conveys its subsistent mode of being, it is brought up *either* in its capacity of individual being and, accordingly, by focussing on its individuality (primary ousia), *or* by focussing on its infima species (indicated here by *eidos*) or one of its genera (secondary ousiai). What Aristotle means to say is that, when we bring up something of the outside world by focussing on what it primarily or secondarily *is* — that is to say, not after one of its coincidental features — it is brought up according to the primary way of designating it. Hence it is clear that οὐσία refers to the thing's most proper (primary) mode of *subsistent* being or its immediate sequels, viz. the modes of being conveyed by the names of its *eidos* or genera.<sup>94</sup>

Subsequently, a number of inferences are drawn, necessarily following from the use of such essential designations. Referring to the transitivity rules of chapter 3, it is claimed that the use of a name implies the assignation of its definiens to its referent by substitution (μετάληψις), so that “both the name and its definiens (καὶ τοῦνομα καὶ τὸν λόγον) will be said of the substrate” (2a19-21). This is explained:

*Ibid.* 5, 2a21-27: For instance, man is said of the individual man as its substrate,<sup>95</sup> and the name <‘man’> is of course used for him (since

<sup>94</sup> Thus, the ousia doctrine of *Cat.* is perfectly in keeping with that found in *Top.*; my sections 4.43; 5.1-5.2.

<sup>95</sup> I.e. an individual man is addressed as ‘man’. The description of perceptible particular ‘things’ as the referents of all significative expressions and never themselves acting as any kind of ‘universal thing’ is also explicitly found elsewhere,

you will be using 'man' for the individual man); and also the definiens of 'man' will be used for the individual man, since the individual man is both a man and an animal,<sup>96</sup> so that both the name and the definiens will be used for the substrate.

#### 4. 42 *Sequels to naming concerning 'things present in a substrate'*

The picture is different, however, as far as things which are *in a substrate* (τὰ ἐν ὑποκειμένῳ ὄντα) are concerned. In most of these cases, neither the names nor the definiens can be assigned to the substrate; in some cases the name can, the definiens cannot:

*Cat.* 5, 2a27-34: But as for things which are in a substrate, in most cases neither the name nor the definiens is said of the substrate. In some cases there is nothing to prevent the name from being said of the substrate, but for its definiens this is impossible. For instance, the 'being white' that is present in a substrate, is said of it (since a body is called white), but the definiens of 'being white' will never be said of the body.

This paragraph bears on items (2) and (3) of the semantic diagram. These cases are quite complicated because they involve two different devices, viz. 'being said of a substrate' and 'being present in a substrate'. The core of the problem is that the names referring to individual properties as inhering in a substrate can be assigned to this substrate, provided that they refer to the property it possesses, and *eo ipso* to the possessor, but not generally to the mode of being involved in having the property. So being white is present in a substrate as one of its modes of being, and can be said of that substrate, calling it 'the white' <thing>. However, since the definiens of such names (as of any name) always bears on the universally applicable mode of being taken by itself, irrespective of the fact that the individual property it signifies actually inheres in a substrate, it cannot ever be said of the substrate. Taking the property of being white, the body this property inheres in can be called '\* (the) white', not 'whiteness', let alone 'a colour which makes the faculty of vision discern', which is the definiens of white.<sup>97</sup> Hence it is important to observe the appropriate boundaries of each expression, and to take heed of the semantic ambivalence of the expressions 'being white' and 'whiteness', which

e.g. *APr.* I 27, 43a25-29 and *APo.* I 1, 71a23-24.

<sup>96</sup> Adding (with the exemplars of the Armenian and one of the Syrian translations) καὶ ζῷον.

<sup>97</sup> *Top.* III 5, 119a30.

both indiscriminately signify this actual state of whiteness, as well as, generally, the universally applicable property of whiteness.<sup>98</sup>

What this exposition is meant to show is that each and every aspect of naming, which obviously implies the existence of all kinds of (immanent) forms, i.e. (essential or coincidental) modes of being, can be perfectly well accounted for without Plato's doctrine of the transcendent Forms.<sup>99</sup> The only ingredients needed for a satisfactory account of the picture of the phenomenal world are the ὑποκείμενα and their appurtenances and 'apparels'.

Aristotle's main philosophic intention will be more apparent in the next few lines, in which he emphasizes the pivotal position of primary ousia. In a word, any instance of naming by which we bring up something, can eventually be reduced to the firm resort of substrates, which are as many primary ousiai. So there is no need for transcendent Being. On the contrary, without primary ousiai, which are the inhabitants of this world *par excellence*, there would be no room for accidental modes of being, let alone such things as Platonic Forms. This basic view is elucidated both on account of the 'things said of' and the 'things present in':

*Ibid.* 5, 2a34-b6: All things other <than primary ousia> are either said of the primary ousiai as their substrates or present in them as substrates. This is clear from an examination of cases. For example, being an animal is said of being a man and therefore also of the individual man; for were it said of none of the individual men it would not be said of man at all. Again, colour is in body and therefore also in an individual body; for were it not in some individual body it would not be in body at all. Thus all the other things are either said of the primary ousiai as substrates or in them as substrates. So if the primary ousiai did not exist it would be impossible for any of the other things to exist.

Ackrill (83) rightly claims that Aristotle's conclusion at 2b5-6 is evidently intended to mark out primary substance as somehow basic (*contra* Plato), but thinks that the point is not well expressed. In my view he is wrong: for in his discussion with Plato, Aristotle may assume it to be *in confesso* that if there were no secondary substances there would be no primary substances either. What suffices for Aristotle, then, is to show (*contra* Plato) that the inverse is also true. So in fact he intends to mark out (*contra* Plato) primary substance as

<sup>98</sup> Semantic Main Rule, RMA; my section 1.71.

<sup>99</sup> Plato's semantics as invested in his doctrine of the transcendent Forms is discussed in De Rijk (1986), 217-354.

really basic too by arguing for the indispensably *immanent* position of genera and species in particulars.<sup>100</sup>

#### 4. 43 *The ontic status of δεύτεραι οὐσίαι. Ousia further assessed*

In the subsequent passages, the different status of the respective secondary ousiai, going from the lowest *eidos* (infima species) to the highest genera, is discussed, and in the line of thought presented, the proper nature of primary substance (πρώτη οὐσία) as well as genuine naming is thrown more light upon (2b7-3a6).

The infima species is said to be more an ousia than the genus, since it is nearer to the individual or primary substance. For if one is to bring up an individual by using the first way of categorization, saying what-it-is (τί ἐστι), it will be more informative and apt to yield the species rather than the genus. So it is more informative to call an individual human being 'man' than 'animal', because the former designation is more proper, the latter more general (2b7-13). Further, the species has something more in common with primary ousia. It is because primary ousia acts as substrate to all other things and all other things are said 'of it' or 'are present in it' that primary ousia is most entitled to the name οὐσία. Now just as the primary ousia stands to all other things, so the species stands to the genera, in that the former are the substrates of which the genera are said, whereas the species are not said of the genera; and for this reason the species is more ousia than the genera (2b15-22).<sup>101</sup>

In this discussion it seems that by so closely linking up the infima species with primary ousia, Aristotle anticipates as it were his later view expressed in *Met.*, to the effect that the essential undividedness of infima species and individual being is the only serious candidate for being 'true ousia'. At the same time, the doctrinal content of his account should be considered a pivotal stage in Aristotle's controversy with his master, Plato. The nearer the immanent forms are to individual being (primary ousia), the more ousia they are. As early as in *Cat.* Aristotle displays an unmistakable attempt to telescope infima species into primary ousia. This cannot come as a surprise: this procedure was Aristotle's main weapon against Platonic χωρισμός. As

<sup>100</sup> De Rijk (1980), 40.

<sup>101</sup> From a different (inferential) point of view, it is claimed at ch. 13, 15a4-7, that genera are always prior to species, since they do not reciprocate as to the implication of being given; cf. 12, 14a29-35; my section 4.87.

a matter of fact, between *Cat.* and *Mel.* this telescoping became more and more prominent.<sup>102</sup>

In the next paragraph (2b22-28) it is claimed that of the several species occurring under a genus one does not have the substantial mode of being to a higher degree than another, so the individual man is no more ousia than the individual ox.<sup>103</sup>

What the genera have in common with the infima species is that they are uniquely entitled to the name δευτέρα οὐσία. Unlike all other things, they have this unique position in the wake of (μετά) primary substance, since, to begin with, of all things said of something secondary ousiai are most informative about an individual being's 'what-it-is'. For if one is to say of an individual man what he is it will be appropriate to give the species or the genus (though it still is more informative to say 'being a man' than 'being an animal'). But to come up with any of the other designations which refer to other, non-subsistent modes of being, would be out of place; for instance, it is inappropriate to designate the individual man as 'being pale' or 'moving quickly' or anything like that (2b29-37). Besides, there is an argument of a semantic nature: qua being coincidental, the assignment of a non-subsistent mode of being implies that of a subsistent one. That is to say, your speaking of an individual man as 'being literate' entails your calling him 'an animal skilled in grammar'.<sup>104</sup>

In the subsequent lines, the close semantic relationship between primary and secondary ousia is further elaborated. The leading thought is the clear kinship between all the items found in the first way of addressing things (κατηγορία), including the way in which things are brought up by calling them after the substantial differences, specifying their genera.

#### 4. 44 *The characteristics of οὐσία and their specific differences*

The first characteristic of any ousia is its not 'being in a substrate'. This expression is taken in the sense in which it was defined earlier (1a24-25): 'being in some particular thing, not as its part, and

<sup>102</sup> De Rijk (1951), 141ff.

<sup>103</sup> We would say 'an individual worm'. The βούς was not in high esteem; cf. expressions like βούς ἐν πόλει ('bull in a china-shop'), βούς ἐν αὐλίῳ ('round peg in a square hole', said of a useless person), Liddell & Scott, s.v., VIII.

<sup>104</sup> The implication is expressed by οὐκοῦν καὶ at 3a5. Ackrill seems to have missed the point by rendering 3a4-5: "If you will call the individual man grammatical it follows that you will call both a man and an animal grammatical".

incapable of existing separately from what it is in'. As for primary ousia, this property is definitorial. And it is obvious at once, Aristotle says, that the secondary ousia is not in a substrate either (though it is said of it). He does not explain why this is so, and only gives some examples: neither the species 'man' nor the genus 'animal' — though being *said of* the substrate, man — are *in* it.

Ackrill (84f.) has problems with Aristotle's claim that it is "obvious at once" that a secondary ousia does not meet the given definition. In his opinion Aristotle is merely appealing to the obvious impropriety in ordinary speech of saying such a thing as 'man is in Callias'. I believe we should go in a different direction by using the information presented in 3a10-15 to understand what exactly is meant by the definition of 'being present in a substrate'. The second part of the exemplification (3a15-21), then, bears on the semantic difference between name and definiens, which was already examined at 2a27-34. There it was explained that unlike names, a definiens should always refer to a universally applicable mode of being, irrespective of the fact that it signifies an individual property to actually inhere in a substrate. In the present passage, Aristotle says that this difference between name and definition does not apply in the case of a secondary ousia, and hence we cannot say that (what is signified by the name of) a secondary ousia is 'in a substrate':

*Cat.* 5, 3a15-21: Further, while there is nothing to prevent the name of things present in a substrate from being sometimes said of the substrate, this is impossible for the definiens. Now the definiens of the secondary ousiai is said of the substrate, as well as their name: you will assign the definiens of man to the individual man, and likewise that of animal.

As a matter of fact, unlike when you apply names signifying non-substantial forms, such as '(being) white', in which case you are not allowed to replace them with their definiens, when you make use of names signifying secondary ousiai, the substitution is always valid. Taking Aristotle's examples, man and animal, you may call the individual man, Socrates, 'a man', or use the name's definiens, 'a rational two-footed animal'; or, if you like, you may go on to use the definiens of the generic name 'animal' and address him as 'an animated body' — each time being less informative, though, as we were told earlier (2b8-11).

By way of corollary it may be inferred from this passage that in the definition given at 1a24-25, 'being in a substrate' must refer to the



non-substantial mode of being of something present in something else which possesses the substantial mode of being, viz. the ὑποκείμε-vov. In other words, cases of 'things' being in a substrate always involve expressions transgressing the categorial boundary of substance.

The feature of not being in a substrate also applies to the differentiae occurring in the category of substantial being, e.g. 'footed' and 'two-footed', which are both said *of* the substrate, man, but are not *in* a substrate. Likewise, the test concerning the substitution of the definiens for the name works out positively: if the individual man is called 'a two-footed entity' he can also be called 'an entity having two feet' (3a21-28).

In a footnote like remark (3a29-32), the author says that we need not be disturbed by any fear that we should be forced to say that the parts of an ousia, being of course present in a substrate, viz. the whole ousia, are not ousiai. For in the definition of 'being in a substrate', the feature of being in a substrate *as a part* has been ruled out *expressis verbis* (1a24-25).

The semantic characteristic of ousiai and differentiae alike is that all things named after them are so called synonymously, meaning that if both a man and an ox are called animals, in a certain sense they have the name 'animal' and its definiens in common in precisely the same sense of 'animal' and 'animate body'.

It is of paramount importance to see that this paragraph is all about naming and ways of designating things ('appellation'), definitely not statement-making. This procedure should be compared with Plato's lore of naming: things of the outside world that partake in the transcendent Forms are *named after* them. However, the transcendent Form is pre-eminently entitled to its name and for all time, while the transitory things partaking of it are only allowed to bear this name as long as they exist.<sup>105</sup> Each Form has its own name, and its primary referent is the Form itself, whereas the particulars are, as it were, derivative referents, owing to the fact that they possess immanent natures caused by the Forms.

In the picture of *Cat.*, however, there are no traces left of Platonic transcendence. The names are synonymously used to stand for the forms (εἶδη, and genera and differentiae as well) falling under

<sup>105</sup> Plato, *Phaedo* 102Bff.; *Parm.* 130E; 131E9-132B3. Cf. *Phaedo* 78E2; 103B7-E3; *Rep.* X, 596A7; *Sophist* 240A. Also Aristotle, *Met.* A 6, 987b3-10; A 9, 990b5-7. Synonymity is discussed in De Rijk (1986), 62; 317; 323ff.

the first category; they are all equally entitled to bear the names.<sup>106</sup> “For all the names (‘designations’; κατηγορίαι) are said either of the individuals (κατὰ τῶν ἀτόμων) or of the species” (3a34-36).<sup>107</sup> Of course, Aristotle is speaking of the secondary ousiai and the differentiae as the sources of naming, “For from primary substance no naming (κατηγορία) derives, since it is said of no substrate. But of the secondary ones the species is said of the individual, the genus both of the species and of the individual; and the differentiae are likewise said of the species and of the individuals” (3a36-b2).<sup>108</sup> So individuals may be designated by specific or generic names and admit their definiens as well, as the species admits the definiens of the genus (3b2-4). This is generally explained by the transitivity rule that whatever is said of something is also said of its substrate (3b4-5; cf. the transitivity rule of chapter 3). The same applies to the differentiae: both the species and the individuals admit the definiens of their differentia (3b6-7). Now this partaking in one another’s name and definiens is precisely what was said earlier (1a6-12) to be the core of naming synonymously (3b7-8).

#### 4. 45 *On the this-ness and definiteness of ousia*

In terms of semantics, the next paragraph (3b10-23), which deals with the nature of ‘subsistence’, is of paramount importance. Taking the semantic diagram drawn up in chapter 2, 1a20-b9, the items (1) and (4) are opposed to (2) and (3) on account of ‘being not in a substrate’: (1) and (4) are not, (2) and (3) are. Quite in line with the special sense of the notion ‘being present in a substrate’, which in fact boils down to ‘inhering in something from the first category’, every ousia (item (4)) is said (3b10) to signify a certain ‘this’.

<sup>106</sup> Cf. *Met.* α 1, 993b25-26; Γ 2, 1003a33-b10.

<sup>107</sup> Including the genera. Notice that εἶδος is not only used for the infima species, but also includes the superior genera (the highest genus excepted), since these are all εἶδη of the higher genera. When εἶδος is used for the infima species only, it is indicated by the phrase ‘the εἶδη which are not genera’ (2b22-23).

<sup>108</sup> The same view is found at *APr.* I 27, 43a25-35, where Aristotle claims that in stating e.g. the pale thing over there to be Socrates, there is no genuine designation (‘predication’, we would say), but only a case of being said of coincidentally, “for as a rule it holds of each sensible particular that it cannot be said of anything, save coincidentally” (43a33-34). It is noteworthy in this connection that in his syllogistic formulas, Aristotle never uses proper names or singular designations (cf. Ross, *ad loc.*). This has everything to do with Aristotle’s doctrine of epistemonik proof and its strict procedure of addressing singulars in their capacity of possessing universally applicable forms. See *APo.* I 22, and my sections 2.56; 2.71; 7.4; 9.6-9.7.

The expression 'to signify a certain this' (τόδε τι σημαίνειν) calls for further comment. As to the use of the verb σημαίνειν, Ackrill (88) is of the opinion that Aristotle is careless when he speaks as if it were *things* (ousiai, 'substances'), and not *names* that signify, and so seems to confuse the ontic and the linguistic domain. But such a charge ignores what we have presented as one of the semantic Main Rules of Aristotelian (Ancient) semantics, to the effect that names are significative terms *taken in their capacity* of being significative of something, and, accordingly, by nature also convey the 'thing' signified. Hence, semantically speaking, the name used and the thing named tend to form an unarticulated unity. So it is understandable that there should be an easy transition from e.g. 'white' used as a name to the property whiteness referred to.<sup>109</sup>

What, then, is meant by 'signifying a certain this'? It is explained at 3b12-13 as 'revealing something as being an individual and numerically one', and, some lines further on (3b16-17) the one-ness is paraphrased in terms of lacking universal applicability, meaning that what is 'a certain this' does not belong to the 'things said of a substrate'. Thus to signify something as 'a certain this' comes to referring to it qua possessing oneness, definiteness and subsistence. From Aristotle's anti-Platonic point of view, all this is clear enough. However, what can we say about secondary ousiai, which are the specific and generic forms inhering in the primary ones? To Aristotle's mind, they cannot possibly have the this-ness and definiteness the Platonic Forms are supposed to have. Their ontic status must be looked for in *this* world.

On the face of it, Aristotle says, the secondary ousiai seem to have 'this-ness' in common with the primary ousiai. Yet they rather seem

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<sup>109</sup> De Rijk (1978), 93f.; (1980), 35; 44f.; 47, and the semantic Main Rules RMA and RSC (section 1.71). Modern usage too allows us to make use of this ambivalence by saying 'White [i.e. the name] is correctly said of this wall, because it [i.e. the property of being white] is present in it'. This use is not careless: it prevents us from keeping name and thing named too strictly apart. Sharp distinctions are only needed to avoid misunderstandings or rebuke sophistries; my section 1.73. — Incidentally, in his paper on 'Inherence', Owen somewhat loosely sets aside (1965, 97; 1986, 252) "the question whether Aristotle thinks of a predicate primarily as an expression, or as what an expression stands for, or as both indifferently". But when we deal with inherence, we should not overlook the far-reaching fact that Aristotle shares the Ancient view that like any other linguistic expressions names too are indiscriminately (rather than Owen's 'indifferently') used to stand for the tool and its content. For this basic rule (RIR) concerning any significative expression (whether simple names or assertibles, or fully-fledged assertions), parallels are found in modern usage; my section 1.73.

to signify a qualified mode of subsistence ('being human', 'being an animal' etc.)<sup>110</sup> that primary ousiai have in common with other individuals of the same species or genus:

*Cat.* 5, 3b10-18: Every substance seems to signify a certain 'this'. As for the primary ousiai, it is indisputably true that each of them signifies a certain 'this'; for the thing revealed <by the name, when used to refer to an individual> is individual and numerically one. But as regards the secondary ousiai, though it might appear, in a way, corresponding to<sup>111</sup> the form of the designation (τῷ σχήματι τῆς προσηγορίας) — when one addresses the individual as 'man' or 'animal' — that a secondary ousia signifies a certain 'this', this is not really true; rather, it signifies a certain qualified being (ποιόν τι), for the underlying thing <signified by the secondary ousia expression><sup>112</sup> is not, as in the case of primary ousia, one, but man is said of many things, and so is animal.

As for primary ousia, things are quite clear: a τόδε τι or 'this' is a discrete and unitary entity marked out as something individual and numerically one. But what about secondary ousia? By putting things in the aforesaid way, Aristotle has managed to save his ontology of immanence. But it is a close call: it is unfortunate that he should draw the contrast between primary and secondary ousia by saying that the latter signifies a certain qualification, because this might, at first glance, suggest that secondary ousia belongs in the category of Quality.<sup>113</sup> The subsequent lines (3b18-23) are meant to rule out such a misunderstanding. To this end Aristotle goes on to contrast secondary ousia with qualified being as occurring in the non-substantial category of Quality. Taking as an example the name 'being white' said of something, it is stated that this expression by itself focusses on nothing but the thing's having a certain qualitative property, rather than its subsistent being, while in the case of naming things after the qualification (read: modification) of their mode of subsistence, it is the latter that is at the focus of attention:

*Ibid.* 5, 3b18-21: However, it [secondary ousia] does not signify simply some qualitative being, as 'white' does. For 'white' signifies nothing but a mode of qualitative being (ποιόν), whereas it is with reference

<sup>110</sup> Ackrill, 88f.

<sup>111</sup> I take the adverb ὁμοίως to go with the immediately following dative σχήματι. Taking here the adverb to go with the verb σημαίνειν, and the dative to be a dativus causae yields a needlessly harsh construction; but with Aristotle, an emphatic position (at b13) of the adverb going with the verb at b14 would not be unthinkable; De Rijk (1980), 45, n. 46.

<sup>112</sup> Note the application of the semantic Main Rule RMA (my section 1.71).

<sup>113</sup> Ackrill, 88.

to subsistent being (περὶ οὐσίαν) that the species and the genus mark off the qualification — they indeed (γάρ) signify an ousia as being of a certain kind.

It is important to realize that once again the different ways of naming of one and the same particular is at the focus of Aristotle's attention. So one and the same subsistent entity, say, Callias, may be designated as 'this man', as well as \*'this pale', but these ways of referring to him, 'qualitatively' so to speak, are quite different from one another.

One might object that at 3b18 τὸ λευκόν, as opposed to species and genera in the first category (at 3b19), must refer to the species 'white' primarily, and thus ask whether it really refers to a white particular thing, say, Callias. One has to recall, however, that Greek idiom allows phrases like τὸ λευκόν to indiscriminately stand for 'white thing' and 'white colour', to the extent that in that ambivalent phrase the notion of 'thing having the property, white(ness)' is predominant; but the Greek never rules out the sense 'the property of whiteness qua affecting the white thing', immanent whiteness, that is.<sup>114</sup>

In a subsequent footnote-like remark (3b21-23), the author says that when we use a modification effected by a name conveying a generic mode of subsistent being, such as 'being an animal', the thing under examination is more vaguely designated than when we use a specific name like 'being a man'.<sup>115</sup>

#### 4. 46 *On certain other characteristics of οὐσίαι*

In 3b24-4a22 three other characteristics of ousiai are dealt with, in fact three items which were eagerly debated in the Platonic circle,<sup>116</sup> viz. contrariety, the 'more and less', and the susceptibility of contrary properties.

There is nothing contrary to ousiai. This holds of primary and secondary ousia alike, but of other things as well, e.g. Quantity. Thus nothing can be brought up as 'the contrary to this man', or 'man' or 'two cubits long'. All such designations are senseless (3b24-32).

<sup>114</sup> My sections 1.71-1.72.

<sup>115</sup> In Aristotle's words: "One draws a wider boundary with the genus than with the species, for he who says 'animal' includes a greater class [whose members have, of course, a less specific mode of being in common than a smaller one] than he who says 'man'"; cf. *Cal.* 5, 2b7-13.

<sup>116</sup> Oehler (1984), 220.

Another characteristic, we may say (δοκεῖ), is that ousia does not admit of a more and a less — meaning that any given ousia is not called more, or less, that which it *is*.<sup>117</sup> What Aristotle means to say is that unlike qualities, ousia does not admit of degrees of intensity; something either has an essence or lacks it. For instance, if this particular ousia is a man it will not be a man to a higher or lesser degree than itself at another time, or than another man, as one pale or beautiful thing may be more pale or more beautiful than another (3b33-4a9).

The most distinctive characteristic of ousia is that, while remaining numerically one and the same, it is able to receive contraries. That is to say, when an ousia has received a property contrary to what it possessed before, it still remains one and the same ousia, whereas a colour changing from black to white or an action changing from good to bad lose their identity. Obviously, Aristotle is claiming that a thing's, [*x*]'s, property of being black is not the same property as [*x*]'s being white, despite the fact that [*x*] remains one and the same ousia. An ousia, however — and ousia alone — is able to undergo qualitative changes without losing its numerical identity (4a10-22).

Ackrill (89f.) raises some interesting criticisms on this account. He is of the opinion that what is required is to show — not that [*x*]'s blackness cannot retain its identity while becoming white, but — that [*x*]'s blackness cannot retain its identity while having contrary properties at different times. The sort of suggestion Aristotle ought to rebut, Ackrill thinks, is e.g. that one and the same individual instance of colour could be at one time glossy and matt at another, this variation not making it count as different instances of colour.

I am afraid Ackrill has missed Aristotle's point. Aristotle is not talking about the different natures of 'substances' and colours, including any shades of colour, but of the difference between ousiai and their property of being coloured. What he tries to make clear is that when we assign different ways of being coloured to a substrate [*x*], the latter retains its identity. The question whether colour taken by itself is susceptible of contraries ('black', 'white', 'glossy', 'matt') is not the issue here. And quite reasonably so, because Aristotle is speaking of the different ways of bringing up particulars in the outside world for

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<sup>117</sup> The etymology and focal meaning of οὐσία is here alluded to: as a form, οὐσία (from \*ont-ia) is precisely that which causes a thing to be that which it *is*. My sections 1.62-1.63.

discussion, not any abstract classification of substantial and non-substantial things.<sup>118</sup>

#### 4. 47 *An additional question about λόγος and δόξα*

Next follows (4a22-b18) an interesting remark about statement-making. Someone might object, Aristotle suggests, and say that ousia is not the only thing that possesses this characteristic, but assertibles and beliefs do too:

*Cat.* 5, 4a23-28: It may seem that the same assertible (λόγος) is true or false.<sup>119</sup> Suppose, for example, that the assertible 'that-somebody-is-sitting' is true; after he has got up this same assertible will be false. Likewise with beliefs. If you truly hold the belief 'that-somebody-is-sitting', then after he has got up you will believe falsely if you hold the same belief about him.

In this passage λόγος — as well as δόξα, for that matter — is used to stand for an assertible, not a fully-fledged assertion (λόγος ἀποφαντικός) composed of an assertible and the assertoric operator 'it is true' (ἔστι). Assertibles receiving contrary properties (in their case the contrary features of being now true, now false) seem to retain their identity, just as ousiai do under those circumstances. However, Aristotle (4a28-b2) responds, there is a decisive difference between them. For in the case of ousiai it is by their changing themselves that they are capable of receiving contraries: what e.g. has become cold instead of hot or dark instead of pale has itself changed. Dictums and beliefs, on the other hand, remain completely unchanged in every respect; it is because the state of affairs (πρᾶγμα)<sup>120</sup> they refer to changes that they come to receive the contrary state. For the assertible 'that-somebody-is-sitting' remains the same, and it is because of the change in the state of affairs that when being part of an assertion, the assertible comes to be true at one time and false at another. The same goes for beliefs.

Aristotle is eager to underline the precise nature of the content of statement and belief. Unlike ousiai, he claims (4b5-13), with assertibles

<sup>118</sup> Compare Aristotle's treatment of quantitative being in ch. 6. There too, he does not list quantitative properties as such, but discusses things which may be brought up after their having modes of quantitative being; Ackrill, 91.

<sup>119</sup> Rather than "The same statement seems to be both true and false" (Ackrill).

<sup>120</sup> That πρᾶγμα does not just mean 'thing of the outside world' was argued for before (my sections 2.22-2.23; 3.41), where Aristotle's ambivalent use of λόγος is discussed. See also my sections 3.52; 4.87 (re: 12, 14b18-22).

and beliefs it is because of what has happened to *something else*, viz. the things they refer to, that they are susceptible of the contraries 'being true' and 'being false'. For it is because the state of affairs it refers to is, or is not, the case that the assertible is said to be true or false ('to apply or not apply'), not because it is by itself (i.e. not yet being applied in an actual assertion) able to receive these contraries.

This exposition of the true nature of statement-making is the more interesting as it makes clear once more that, in Aristotle's view, there is a telling difference between assertibles and assertions (or un-applied and applied assertibles). As a matter of fact, assertions, i.e. assertibles actually applied to some particular state of affairs of the outside world, are no longer susceptible of being both true and false; they are either true or false, period. And, as is often the case in matters of statement-making, the lion's share of Aristotle's attention goes to the assertibles taken by themselves qua main constituents of assertions, rather than to their actually being applied in assertions.<sup>121</sup>

In light of this feature of Aristotle's lore of statement-making, Ackrill's remarks (90f.), however true in themselves, turn out to be less pertinent. Aristotle might have argued, Ackrill says, that the alleged counter-examples, viz. individual statements or beliefs which change their truth-value, fail, because my statement now that Callias is sitting and my statement later that Callias is sitting are not one and the same *individual* statement ('token', in the modern sense) even if they are the same statement ('type'), just as 'a' and 'a' are two individual instances of one and the same letter. Hence, Ackrill infers, they are not examples of the very same individual admitting contraries. As will be clear from what I have argued just now, Ackrill's correct remark concerns *assertions* that are actually made and repeated (his 'statement now' and 'statement later', taken as two tokens of the same type). But what Aristotle is primarily speaking of, is not statements (fully-fledged assertions), but assertibles, which, by their very nature, are linguistic types, not tokens.

The same applies to Ackrill's second remark (91) to the effect that alternatively, Aristotle could have denied that the statement made by 'Callias is sitting', when uttered at one time, is the same statement as the one made by 'Callias is sitting' when uttered at another time. The sameness of a statement or belief, Ackrill rightly claims, is not guaranteed by the sameness of the words in which it is expressed; the time

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<sup>121</sup> For the significance of this contradistinction see my sections 2.16; 3.66, and my *Index* s.v. 'assertible'.



and place of utterance and other contextual features must also be taken into account. Quite so indeed, but again, unlike Aristotle, Ackrill is dealing with the difference between statement-types and statement-tokens. Aristotle discusses assertibles, which as long as they are unapplied ('types'), are, by definition, not affected by time and place of utterance and other contextual features.

#### 4. 48 *What does Aristotle mean by οὐσία?*

The Greek word οὐσία<sup>122</sup> is the noun corresponding to the verb εἶναι, and 'be-ing' or 'entity' would be a literal equivalent.<sup>123</sup> In their commentary on *Met. Z*, Frede & Patzig made a good case for preferring the transliteration 'ousia' to the conventional rendering 'substance', which is less appropriate because of its connotations in modern philosophical usage.<sup>124</sup>

The focal meaning of οὐσία is plain from its etymology: deriving as \*ont-ia from the root 'es', which is common to the verb and the noun, it basically stands for 'being-ness' (medieval Latin 'entitas' or 'natura essendi'). Its focal meaning comes about both intensionally and extensionally. According to its intensional aspect, οὐσία stands for a thing's ontic determinant, i.e. that which causes it to *be* (something); extensionally, it refers to the thing thus determined, (conceived of as) occurring in the outside world.

Unlike Plato,<sup>125</sup> to Aristotle the intensional and extensional aspects are ontologically complementary: no intensional οὐσία occurs without its extensional counterpart, and the other way round.<sup>126</sup> This ontological picture is mirrored by the semantic ambivalence of the

<sup>122</sup> See also my sections 1.62; 9.1-9.4.

<sup>123</sup> Ackrill, 77; Guthrie VI, 204.

<sup>124</sup> *The Oxford English Dictionary*: "1. Essential nature, Essence. 2. *Philos.* A being that subsists by itself; separate or distinct thing; hence *gen.* a thing, being. 3a. *Philos.* That which underlies phenomena; the permanent substratum of things; that which receives modifications and is not itself a mode; that in which accidents or attributes inhere". The *Random House Dictionary*, s.v. 9 has: "a. that which exists by itself and in which accidents or attributes inhere; that which receives modifications and is not itself a mode; that which is causally active; that which is more than an event. b. the essential part, or essence, of a thing. c. a thing considered as a continuing whole". Admittedly, of the current modern languages English is the most hospitable to the Greek linguistic nuances of οὐσία. Ross (1961) is aware (212, re: *An. II* 1, 412a6-20) of the difficulty for a non-Greek reader that we have no word which exactly corresponds to οὐσία.

<sup>125</sup> Guthrie VI, 142f.

<sup>126</sup> *Cat.* 5, 2b5-6; *Int.* 10, 20a20. De Rijk (1980), 40.

word οὐσία: in Aristotle's words<sup>127</sup>: "οὐσία is the indwelling form, the composite of which along with matter is called οὐσία, too". In a similar way, throughout *APo.* οὐσία as an object's quiddity is taken into consideration *qua inhering in* a particular ὑποκείμενον. The same goes for the οὐσία as featuring in the central books of *Met.*<sup>128</sup>

The twofold use of οὐσία (both for a thing's essential and non-essential or coincidental quiddity) should be understood in a similar vein.<sup>129</sup> Again, on this understanding it is easy to see why Aristotle sometimes calls<sup>130</sup> οὐσία a genus in spite of his common doctrine that being is not a genus.<sup>131</sup> Speaking of οὐσία as a genus, Aristotle has the extensional aspect of the word's focal meaning in mind, to the effect that a thing's subsistence or self-containedness is in the picture. When, on the other hand, he denies the status of genus to 'be-ing', Aristotle is speaking from the intensional perspective by denying that the intension, 'being' or 'being-ness' can be considered a generic concept prior to 'being such and such'. In Aristotle's ontology, 'being-ness' is always invested in some specific mode of being as represented by the ten categories: necessarily, to be (εἶναι) is to be something (εἶναι τί).<sup>132</sup>

The position of οὐσία is thrown more light on in the remainder of *Cat.* proper, as we have it extant, where Aristotle discusses the assignment of the main coincidental modes of being to things (chs. 6-8). They will be dealt with in my sections 4. 5 to 4. 7, and 4. 9.

#### 4. 5 *Quantitative being*

Ackrill (91) has aptly observed that in discussion of Quantity (as this 'category' is conventionally labelled) in chapter 6 of *Cat.* Aristotle makes no attempt to list quantitative properties (like the property of being a cubit long), but instead lists and groups owners of quantitative

<sup>127</sup> *Met.* Z 11, 1037a29-30.

<sup>128</sup> E.g. *Met.* Z 16, 1040b23 and Guthrie VI, 221 thereto; cf. main Rules RMA and RSC.

<sup>129</sup> *Top.* I, 9; my section 5.23.

<sup>130</sup> E.g. *Phys.* I 6, 189a14;: "οὐσία is one of the genera" (= 'categories'; see Ross (1936), 490, *ad loc.*); *An.* II 1, 412a6 and Ross thereon (1961), 212.

<sup>131</sup> E.g. *APo.* II 7, 92b14; Guthrie VI, 214.

<sup>132</sup> *Met.* Z 1 *passim*; cf. Δ 11, 1018b31ff. The aforesaid conceptual analysis of 'being-ness' must be counterbalanced by the doctrinal synthesis presented by Aristotle in the central books of *Met.* (Z-Θ). A well-balanced survey of Aristotle's doctrine of being is found in Ackrill (1981), 120-8.

properties, claiming to enumerate all the primary owners of such properties: lines, surfaces, solids, numbers ('numerable aggregates'), time-periods, places, and spoken linguistic expressions.<sup>133</sup> In fact, the author never has an abstract noun for 'quantity' but always uses the Greek word ποσόν, which serves both as an interrogative (πόσον = 'of what quantity, magnitude, degree, amount' etc.) and an indefinite adjective (ποσόν = 'of a certain quantity, magnitude' etc.).

Ackrill attaches much importance — unduly so, in my view — to the list of the categories as a classification of *beings*,<sup>134</sup> rather than from the viewpoint of semantics regarding them as an enumeration of the several ways in which we can bring them up for discussion. So he thinks (92) it is a failure on Aristotle's part that he should not give a list of primary owners of quantitative properties to secure an exhaustive classification of such properties. Aristotle did not invent, for instance, a word related to weight as 'line' is to length, nor did he care about introducing quantitative properties fitting into a genus-species hierarchy.

All this shows once more, I think, that Aristotle's intention in *Cat.* is primarily semantic, i.e. to discuss our use of different names corresponding to the objects' different modes of being. Thus, following the previous chapter on names signifying things after their substantial modes of being (species and genera) as well as their referents, chapter 6 goes on to deal with types of names most frequently used to bring up things after *their* quantitative modes of being. Even in the Lexicon, *Met.* Δ 13, the semantic aspect seems to prevail, where Aristotle explains not the philosophic nature of 'Quantity', but what kind of things can be *designated as* a ποσόν, and how the different names standing for specific modes of quantitative being are used.<sup>135</sup> Therefore it is not surprising or disappointing that Aristotle's list in *Cat.* 6 is not exhaustive.

In the first section of the chapter (4b20-5a37), the different types of quantitative being are dealt with, including the names by which these may be designated, e.g. the continuous entities, 'line' 'surface', 'body', 'time', 'place', alongside the discrete ones, such as

<sup>133</sup> That it is primarily the owners that are indicated, rather than the properties themselves has everything to do with Aristotle's interest in forms *being enmattered* in particulars. Thus health is primarily viewed as the property of being healthy belonging to a particular.

<sup>134</sup> Ackrill, 78-81; 91f.

<sup>135</sup> *Met.* Δ 13, 1020a7-32. Notice the frequent use of λέγεται and the use of ποσόν without a definite article.

‘numerable aggregate’ (ἀριθμός).<sup>136</sup> The discussion includes expositions on the order and position of the parts they may be divided into.

Next follows a section in which the assignment of quantitative names is under examination, including the important distinction between applying names to things in the strict sense (κυρίως) and coincidentally (κατὰ συμβεβηκός). As elsewhere, the latter phrase stands for naming things so-and-so, not in virtue of their own proper mode of being, but because of their coincidentally being related to something else which is entitled to that name in virtue of its own formal nature.<sup>137</sup>

*Cat.* 6, 5a38-b4: Only those we have mentioned are called quantitative beings in the strict sense, all the others coincidentally; for it is to the former ones we look when we call the others quantitative beings. For example, we speak of a large amount of white because the *surface* is large, and an action or a change is called long because the *time* is long. For it is not in its own right (καθ’ αὐτό) that each of the others is called a quantitative being.

The subsequent sections discuss some characteristics of the quantitative mode of being. First (5b11-6a18), this mode has no contrary, e.g. there is nothing contrary to four-foot long or to a surface of a certain measure. One has to realize that ‘large’ and ‘small’, which may appear to be quantitative modes of being susceptible of contraries, are in point of fact relational; for nothing is called large or small just in itself, but with reference to something else. This is further explained in a way which clearly testifies to the procedure of naming things according to their (supposed) features. It is, in fact, the wrong semantic procedure that leads us astray:

*Ibid.* 6, 5b30-33: Moreover, whether or not one *counts* them as quantitative beings, they have no contrary. For how could there be any contrary to what cannot *be grasped* just in itself but only by reference to something else?

By using a misnomer in this respect we will end up in all kinds of absurdities: the pseudo-quantitative modes of being, ‘large’ and ‘small’, will make us assign contraries to one and the same thing simultaneously, and think that things are their own contraries.<sup>138</sup> For

<sup>136</sup> For the basic meaning of ἀριθμός see my section 12.32 in Vol. II.

<sup>137</sup> The relationship between [x] and [y] being coincidental does not exclude a permanent, or even indispensable, going together — the notion ‘coincidence’ only bearing on the fact that ‘being [y]’ is not *formally* implied in ‘being [x]’.

<sup>138</sup> Aristotle thus presents an alternative to Plato’s observations in *Phaedo* 100E-103A.

the same thing happens to be at the same time both large and small, since in relation to  $[x]$  it is small but to  $[y]$  it is large. Such a simultaneity is not even possible in the case of substantial being.

Quantitative being does not seem to admit of a more and a less (6a19-25). For example, what is two cubits long is not so to a higher degree than some other thing of that size. Or take number, Aristotle proposes: we do not speak of what is three in number as being more a number<sup>139</sup> than what is five in number, or than something else that is three in number. Nor, again, is one instance of time more a time than another. The same applies to the other modes of quantitative being listed above: there is not a single one among them as to which a more and a less is spoken of.

Overviewing the previous sections, it is plain that the different modes of quantitative being are not listed by Aristotle to yield an ontological classification, but rather to present several ways of naming things after their quantitative mode of being, including all the possible pitfalls, such as to fail to distinguish between naming things in virtue of their own nature and assigning designations to them because of what is coincidental to their proper nature, or to label quantitative being what really is relational ('category-mistake'). To avoid such mistakes is of great importance for dialectical discussions.<sup>140</sup> To be sure, our author's permanent attention to 'contrariety' (ἐναντιότης) and the admittance of 'a more and a less' (μᾶλλον καὶ ἥττον) is definitely something to do with Plato's metaphysical doctrine, in which these features, particularly the latter, are associated with imperfection and instability and "all that oscillates between two extremes".<sup>141</sup> Unlike for Plato, however, for Aristotle the notion of stability and definite measure (oneness outstandingly) is not the privilege of a transcendent domain of Forms, but simply found in the immanent forms of the outside world.<sup>142</sup>

In the concluding passage (6a26-35) the most distinctive characteristic of what is brought up according to one of its quantitative modes

<sup>139</sup> The logical balance of 6a19-23 suggests the reading (a21-22): τὰ τρία οὐδὲν μᾶλλον τῶν πέντε λέγεται ἀριθμός. My conjecture is supported by the text variants suggested by some old translations (Translatio Boethiana, and two Syrian versions; see the critical apparatus in Minio-Paluello). The note in the *Oxford Translation* is not very conducive to finding out the authentic reading.

<sup>140</sup> E.g. *Top.* IV 1, 121a1-6.

<sup>141</sup> Ph. Merlan, "Beiträge zur Geschichte des antiken Platonismus" in *Philologus* (89) 1934, *passim*. For the doctrinal context in Plato (*Phil.* 23C-26E) and later Platonism see de Vogel (1970), 256-92 and 378-95.

<sup>142</sup> *Met.* I 1, 1052b20ff.

of being (τοῦ ποσοῦ; notice the use of the definite article) — in fact almost the definiens of this mode of being — is said to consist in the thing's being both equal and unequal. That is to say that in virtue of a thing's being quantitative, it is susceptible of being compared to other quantitative things, and to itself taken at different times as well. This holds of any kind of quantitative being:

*Ibid.* 6, 6a26-35: Most distinctive of that which is a quantitative being (τοῦ ποσοῦ) is its being brought up as 'the both equal and unequal <thing>'. For each of the modes of quantitative being we mentioned are called both equal and unequal. For instance, a body is called both an equal thing and an unequal thing, and so is a number, and likewise time, and so on and so forth. But anything else — I mean, whatever is not quantitative being — is certainly not, it would seem, called both an equal thing and an unequal thing. E.g. a disposition (διάθεσις) is certainly not called 'equal' or 'unequal', but, rather, 'similar'; and what is white is certainly not called equal and unequal, but similar. Therefore the most distinctive of that which is quantitative would be its being called up as both 'the equal and unequal <thing>'.

#### 4.6 *The category πρὸς τι as primarily modifying naming*

The opening lines of chapter 7 leave no doubt about the semantic character of this most interesting part of *Cat.*, making clear that it discusses not an ontological classification, but the ways in which we can bring up subsistent things, such as Creon and Antigone, under a relational aspect, calling them 'uncle' and 'niece'; or two things of certain sizes, calling the one 'the double', the other 'the half'.<sup>143</sup> Of course, Aristotle does not mean to say that e.g. the slave Callias is just a relational being — in fact, he is a substance — but only that, in so far as he is *taken as being a slave*, he is brought up under the aspect of relational being; in other words, 'slave' is a relational term.<sup>144</sup> The definition is presented and instanced:

*Cat.* 7, 6a36-b6: All such things are called 'something relational' (πρὸς τι) which are brought up either just in virtue of their being *of* or *than* other things, or qua related in some other way to something else. For example, (1) what is <designated as> 'larger' is so called precisely in its capacity of surpassing something else (it is indeed called larger *than some other thing*); and what is <brought up as> 'double' is so called in precisely being so *of* something else (it is *of* something else that it is called 'double'). Similarly with all other such cases. (2) The

<sup>143</sup> De Rijk (1980), 49-62.

<sup>144</sup> Ackrill, 98; Oehler (1984), 240.

following, too, are among modes of relational being: state, disposition, perception, knowledge, and posture. For each of these is called what it *is* (and not something different) *of* something else. Something's state is called a state *concerning* something else, knowledge knowledge *of* something, and posture a posture *of* something; and the rest in the same way.

It is patently clear that, quite in line with the previous discussions, the phrase *πρός τι* primarily modifies the way of being-named (*λέγεται*) and, consequently, the things brought up in this specific manner.<sup>145</sup> The mode of relational being is said to be of two main types: (a) the one of the 'master-slave', 'larger than' or 'double of' type and (b) the vague group indicated as being 'relational in some other way', which comprises things somehow connoting a reference to something else. It is this group in particular we should dwell upon. But let us first say something about relational naming in general.

#### 4. 61 *The nature and practical impact of relational naming*

Both the label *πρός τι* ('with regard to something') and Aristotle's above-mentioned definition of the things so named convey the notion of correlation. This means that by its very nature 'relational naming' implies a reference to something other than the thing thus named. In other words, taken without the reference the name would not make any sense. From the metaphysical point of view, it is crucial

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<sup>145</sup> Mignucci (1986, 101f.) unduly criticizes Ackrill taking (*ad loc.*) τὸ μείζον and τὸ διπλάσιον as meaning 'what is larger' and 'what is double' and thus suggesting that there is talk of *objects* that are larger or double, since it seems then to be implied that to Aristotle, objects are 'relatives'. However, Mignucci fails to see that it is all a matter of scope distinction: objects *are* not relational beings (Mignucci uses the inopportune term 'relatives'), but can, on occasion, be taken as relational, when compared, that is, to other objects which by themselves are not relational either. He argues (102) that if it is correct to say that if A qua taller is a relative it follows that A is a relative (which is explicitly denied by Aristotle (at 8a16-18). But his assumption is false, since it is not true that A *is* by itself relational qua being tall or taller, but comes to possess a coincidental mode of being when it is associated with another object. Hence Mignucci's proposal (102ff.) to distinguish between 'relative' and 'relational' is of no use. In point of fact, Aristotle only talks of relational modes of being assignable ('cum fundamento in re', of course) to objects. *Pace* Oehler (1984, 248), to Aristotle there do not exist internal relations that fall to objects by themselves, but only relational modes of being which are logically implied in certain ways of addressing things: the slave Callias *is* not a relational being, but can be addressed after his relational mode of being the slave of Callicles. Noticeably, to Aristotle the *πρός τι* 'things' are the least substantial and, accordingly, not (brought up as) subsistent objects; see my section 4.67, on *Met.* N 1, 1088a21-26.

for Aristotle that there should really be a referent without, however, postulating Platonic transcendent Forms.

Grammatically, the referent under examination can be indicated by a word in the genitive or some other case, or by a word preceded by the comparative conjunction ἤ or by a prepositional phrase. The leading idea is that the relational name taken by itself needs completion. So to designate Callias as 'the larger <thing>' is by itself, though intelligible to some extent, not really informative; and neither is calling him 'a (the) slave'; you have to supply the thing correlated, saying e.g. 'than Socrates's, or 'Plato's', respectively.

As for the relational designations made by names of the first group, Aristotle's ontological position is not jeopardized at all, since the two requisite correlates can be found among the (present, past, or future) inhabitants of the outside world. It is only when items included in the second group come up for discussion that we may run into difficulties.

In Ackrill's view (99), it is not clear why Aristotle should consider (6b2-3) this second group relational names. While 'knowledge' and 'perception' may fit the bill, for 'habitus', 'disposition', and 'posture' this seems less intelligible. If all Aristotle had in mind, Ackrill says, were that a habitus is necessarily a habitus *of* someone or something, he would be committed to treating all non-substance terms as relational, since every non-substance must be 'in' something else as its ὑποκείμενον: generosity must be someone's generosity. And if he means that the genitive is specificatory (e.g. 'the habitus of bravery or generosity'), then again he will be committed to counting as relational a vast number of terms (genus terms) which he in fact puts into other categories.

In the subsequent sections it will appear that in raising these questions Ackrill seems to have missed the main point of what Aristotle has in mind in chapter 7.<sup>146</sup>

#### 4. 62 *Of what nature are the correlates mentioned at 6b2-3 ?*

Of all the correlates mentioned at 6b2-3 Aristotle is most explicit about their having to do with cases in which things are designated according to their habitus ('having'), disposition, or posture ('position'), or their act of knowing or perceiving; for each of these, he

<sup>146</sup> A similar misunderstanding is found in Oehler (1984), 241ff.



says, is called what it is (and not something different) *of* something else. That is to say, by evoking the correlates, these names do not convey something different from the name's essential significate: their correlates are formally included in the names.

Let us begin with knowledge and perception, which are commonly regarded as the less arduous cases.

#### 4. 63 *Knowledge (ἐπιστήμη) and perception (αἴσθησις)*

By saying (6b5) that knowledge is knowledge *of* something, Aristotle has the objective content of any act of knowing in mind, but not only as its 'what it is about', but rather as determining the act or activity's essential nature (its 'what-it-is'; ὅπερ ἐστίν).<sup>147</sup> One should realize at the outset that in this context 'knowledge' stands for someone's (actual or habitual) knowing,<sup>148</sup> which, to Aristotle, is (productive of) a habitus of the soul. Now acts of this type are intentional: that is, by their very nature they are related to something outside the mind (i.e. outside the mental state of 'knowing') as their objective content. So some particular instance of 'knowledge', like someone's actually knowing grammar, can only be designated in an essential way (saying ὅπερ ἐστίν) as a *knowing of* something, viz. its (objective) correlate. The same applies to all the correlates under examination, Aristotle claims (6b3-6).

At 6b28-36 Aristotle gives a grammatical outline of the relationship featuring in the correlates just mentioned along with the ones belonging to the first group:

*Cat.* 7, 6b28-36: All relational names are used with reference to correlatives that reciprocate. For example, the slave is called slave of a master, and the master is called master of a slave; the double double of a half, and the half half of a double; the larger larger than a smaller, and the smaller smaller than a larger; and so for the rest, too. Sometimes, however, there will be a verbal difference, viz. of ending. Thus knowledge (ἐπιστήμη) is called 'knowledge *of* what is known' (ἐπιστητοῦ), and what is known 'known *by* knowledge' (ἐπιστήμη ἐπιστητόν); perception (αἴσθησις) 'perception of the perceived' (αἰσθητοῦ), and the perceived 'perceived *by* perception' (αἰσθήσει αἰσθητόν).<sup>149</sup>

<sup>147</sup> Ackrill (99) is right in suggesting that the genitive Aristotle has in view is specificatory.

<sup>148</sup> I.e. an instance of knowing or piece of knowledge; cf. Caujolle-Zaslavsky (1980), 181f.

<sup>149</sup> At *Met.* Γ 5, 1010b30-1011a2, there is an allusion to this priority issue.

This explanation can be connected with what Aristotle says in *Top.* and in the Lexicon of *Met.* Δ on this matter. When dealing with category-mistakes in *Top.* IV, Aristotle comes to speak about a possible category-mistake concerning ‘knowledge’ and qualities such as ‘good’ and ‘noble’:

*Top.* IV 1, 121a1-6: Again, ‘knowledge’ (‘knowing’) is a mode of relational being, whereas ‘being good’ and ‘being noble’ are modes of qualitative being, so that ‘being good’ and ‘being noble’ are not generic to ‘knowing’. For the genera of modes of relational being must themselves be relational, as is the case with ‘being double’; for ‘being multiple’, which is the genus of ‘being double’, is itself also a mode of relational being.

Thus even though knowing something may be seen as a good quality of, say, Socrates, to take ‘being good’ as generic to ‘knowledge’ would classify ‘knowledge’ in general as a good thing, and so rule out instances of bad knowledge.

In the Lexicon (unlike *Cat.* ch. 7), the way of being something else’s correlate is diversified, in accordance with *which* of the two above-mentioned groups is under discussion. For the rest, the doctrine is the same as in *Cat.* ch. 7:

*Met.* Δ 15, 1021a26-b3: Modes of relational being which are applied (λεγόμενα) according to numerical aspects or <a thing’s> capability, then, are all relational in that they are brought up as just what they are *of* (or *than*) something else, not because the other thing is relational to it. But that which is measured (μετρητόν) or known (ἐπιστητόν) or thought (διανοητόν) is called relational because something else is brought up with reference to it. For ‘that which is thought’ implies that there exists (ἔστιν)<sup>150</sup> thinking (διάνοια) of it, but the thinking is not related to the thing of which it is a thought (for then we should have said the same thing twice). And likewise, sight is the sight of something, not of the <subsistent> thing of which it is the sight (however true it is to say that), but it is related to colour or some other ‘thing’ like that. But according to the other manner of speaking, the same thing would be said twice: ‘sight is (1) of that (2) of which sight is’.

Let us have a closer look at the texts. The Greek words for the correlates of knowing, perceiving, and thinking, which all are *adiectiva verbalia* ending with ‘-τον’, are commonly rendered ‘knowable’, ‘perceptible’ and ‘thinkable’. But in this context the renderings ‘known’, ‘perceived’, ‘thought’ etc. are preferable, since there is

<sup>150</sup> So Kirwan correctly translates; the Oxford Translation has ‘is possible’.

always a connection with the objective content of *actual* knowledge (knowing), perception (perceiving), thinking etc.<sup>151</sup>

Why should there be a pleonasm if thinking were related to the thing which it is a thought of? Semantically, the answer is: because this would lead to trivial expressions such as 'what is thought is thought by thinking what it is a thought of'. Evidently, what Aristotle has in mind is that the object of thinking and perceiving, say [x], unequivocally refers to the mind thinking or perceiving [x], but the act of thinking or perceiving does not imply thinking or perceiving just [x].

The difference between the relational things (πρὸς τι) of the 'double-half' and 'master-slave' types, on the one hand, and those of the 'knowledge-thing known' type, on the other, as found in *Rhet.* is expressed by saying that the former in fact are two different things which are πρὸς ἄλληλα ('related to one another'), rather than πρὸς τι. So the line of proof based upon such differently correlated things as giving and receiving, or commanding obedience and obeying the command, is at *Rhet.* II 23, 1397a23 introduced as a proof ἐκ τῶν πρὸς ἄλληλα. Likewise at I 3, 1359a16-26, where statements giving praise or blame are dealt with, and a comparative approach to the matter is recommended, the author says that you have to show that the good or harm, the honour or disgrace, the justice or injustice, are great or small, either when taken by themselves, or in relation to other things (ἢ καθ' αὐτὰ λέγοντες ἢ πρὸς ἄλληλα ἀντιπαραβάλλοντες). At II 19, 1392b3-5 'being double' and 'being half' are brought up as belonging to the things that are naturally related to each other (τῶν πρὸς ἄλληλα πεπφυκότων).

The text from *Met.* leaves no doubt that the 'object' of knowledge, perception etc. is not the extramental thing as such, but this thing *qua known, perceived*, and so on. So in the case of sight, the proper object, which is the correlate meant in this frame of reference, is the thing's being coloured or a similar mode of being (in Aristotle's words: "or some other 'thing' like that"). Of course, the extramental thing itself may also be regarded as the object of the act of knowing, perceiving etc. (1021b1), but as far as the reciprocating correlates

<sup>151</sup> The so-called 'editio composita' (which is an adaptation of the translatio Boethiana dating from the Carolingian period) rightly reads (p. 59<sup>21-23</sup> ed. Minio-Paluello): "disciplina disciplinati dicitur disciplina [...] et sensus sensati sensus". For that matter, all the problems raised by Kirwan on *Met.* Δ 15, 1021a26ff. will disappear once the *adjectiva verbalia* have been taken in their participial sense.

(ἀντιστρέφοντα, 6b28) are concerned, the object's specific mode of being correlated to the act under discussion is at the focus of attention.

Thus at 6b36 'knowledge', 'perception' etc. stand for particular instances of knowing, perceiving etc.; and even though they are all certain modes of relational being, they may serve as a means to bring up an extramental thing through a non-substantial, viz. relational appellation. The special problem of this manner of naming is that the name used has not only a referent but also implies the existence of a 'reciprocating correlate'. So to avoid any reference to Platonic transcendent Entities, it is important to clearly indicate the ontological status of this correlate: 'knowledge is brought up qua "just what it is" (ὅπερ ἐστίν) as "knowledge of"; now the correlate implied in this "of" is what is actually involved in this particular act of knowing, and what is known, by implication, is brought up correlatively as "known by <this act of> knowing". On a similar understanding, Aristotle can say (6b35-36) that "perception is perception of what is perceived, and what is perceived is brought up as perceived by perception".

#### 4. 64 *State* (ἔξις), *disposition* (διάθεσις), and '*posture*' (θέσις)

Ackrill (99) has good reasons to say that with regard to 'state', 'condition' and 'position' ('posture') it is not obvious what Aristotle has in mind when he says that they are followed by genitives (and, accordingly, are among the terms referring to modes of relational being). On the face of it, at least, they hardly seem to fit into the list of πρὸς τι 'things'. One should, however, make use of the hint that these three are listed together with the items 'knowledge' and 'perception', and attempt an approach along similar lines.<sup>152</sup> This move seems the more recommendable as in the *Topics* ἔξις and διάθεσις are explicitly called the genera of ἐπιστήμη, and all three are listed among the 'things' said '*of something*'.<sup>153</sup>

<sup>152</sup> De Rijk (1980), 50-5.

<sup>153</sup> *Top.* IV 4, 124b39-125a1.: "Both knowledge itself and its genera, e.g. disposition and habitus ('state'), are said *of something*". For that matter, knowledge as a 'habitus' of the soul is common Aristotelian doctrine. *Top.* IV 2, 121b38; VI 6, 145a36-37.

## (a) Ἔξις

The focal meaning of ἔξις, the verbal noun from ἔχειν ('to have'), is 'the having', 'possession', which may differentiate into 'holding', 'wearing', and so on. In this semantic field, Aristotle seems to discern a special area in which the notions 'having' and 'being had' are remarkably interwoven. In *Met.* Δ 20, 1022b4-5, ἔξις is defined as a certain 'functioning' (ἐνέργεια) of the 'haver' and 'what is had'. This definition is first explained, and then ἔξις is linked up with its twin notion, διάθεσις:<sup>154</sup>

*Met.* Δ 20, 1022b4-14: In one sense, (1) 'having' is called a sort of functioning of the 'haver' and the 'thing had', such as in the case of a certain action or movement. For whenever one thing effects and another is effected, there is producing between them; just so there is 'having' between one who wears a garment and the garment worn. As for this kind of 'having', then, it clearly is not possible to use the expression 'to have the having', for you will go on to infinity if there is such a thing as 'to have the having of the thing had'. In another sense, (2) 'having' is called a disposition by virtue of which the thing disposed is either well or ill disposed, and so either in its own right or with reference to something else. For example, health is a sort of 'having', for it is such a disposition. Again, we speak of 'having' whenever there is a portion of such a disposition; that is why the excellence of <a thing's> parts too is a sort of 'having'.

At first glance, the Greek expressions look just as clumsy as our modern renderings do. What Aristotle tries to make clear is that just as actions are unthinkable without the notion of an intrinsic ('cognate') object (such as in 'to laugh a (sardonic) laugh') — which, by its very nature, forms an integral part of the activity — likewise from the viewpoint of deep structure, 'having' and 'being had' are, so to speak, osmotically connected.<sup>155</sup> Hence, still from the viewpoint of deep structure, 'making' and 'having' are not to be taken as 'acting' qua opposed to 'undergoing' ('being made', 'being had'), but rather in a sense prior to the usual 'action-passion' split; something similar is found with some English verbs like 'to print', which may be indiscriminately used for the activity and the state effected by undergoing this activity.<sup>156</sup>

<sup>154</sup> Cf. Van Ophuijsen (1993), 739-55, where the relationships between the notions διάθεσις and ἐνέργεια are assessed.

<sup>155</sup> Compare English 'to have or own [x]' = 'to be possessed of [x]'.

<sup>156</sup> 'To print' = 'produce by applying inked types', 'take impressions from type', 'state of being printed'. Cf. the transitive and intransitive uses of 'to sell', 'to show', and many other verbs.

In his excellent paper on *Cat.*<sup>157</sup>, C.M. Gillespie made an interesting suggestion to the effect that Plato, *Theaet.* 197B and *Laws* I, 625C, make it probable that ἔξις in this sense is originally used to stand for the ἐνέργεια of wearing clothes, armour, and so on, as opposed to the mere possession of them. I earlier gave Gillespie's suggestion a broader range, to the extent that the above 'wearing' sense of ἔξις is merely a particular case of the comprehensive sense of 'to show a way of being'. Thus 'having' determines or qualifies one's way of appearing or mode of being.<sup>158</sup>

Speaking of the intimate connection between 'having' and 'doing' in this respect, we come across a nice combination of ἔξις and πρᾶξις in Plato, *Rep.* IV, 433E12-13, where justice is defined as 'the having (ἔξις) and doing (πρᾶξις) that which is a man's own, and is proper to him'. Likewise, in *Crat.* 414B-C, the interrelationship between the 'having of reason' (ἔξις νοῦ) and skill (τέχνη) is etymologically supported by explaining τέχνη = ἐχονή. We find ourselves on similar ground when we observe the different ἔξεις in Aristotle, *EN* II 5, 1105b25-26, where they are defined as the things in virtue of which we *stand well or badly*. In *Spir.* 14, 474a25-26, we read the phrase "life and the 'having' of soul" (τὸ ζῆν καὶ ἡ τῆς ψυχῆς ἔξις), where the possession of the soul is associated with the activity of living: he who has soul is 'had by soul' or 'anima-*ted*'. At *Met.* Γ 5, 1009b5, '*having* mind' stands for '*being* sane' ('healthy-minded').

In all such cases ἔξις clearly determines the haver's mode of being, which results from the very fact of 'having' something, that is to say, the 'thing had' substantially modifies the haver's being or behaving. For the Ancients this is not just a manner of speaking. In *Met* I 4, where contrariety is discussed in the context of coming-to-be and passing away, the comings-to-be which happen to the matter and start from the contraries, are said (1055b12-13) to proceed either from the form and the having of the form, or from a privation of the form. In these cases too the 'form had' (εἶδος) determines the haver, so as to identify the ἔξις τοῦ εἶδους with 'being informed'. In Plato, *Soph.* 247A5-6, the 'having of an (un)just soul' = 'being had by this soul' = 'being (un)just', so that ἔξις boils down to παρουσία.<sup>159</sup>

<sup>157</sup> Gillespie (1925), 82; see also my additional note on p. 471 below.

<sup>158</sup> De Rijk (1980), 50-62. From this angle, the well-known use of ἔχειν with adverbs of manner to indicate one's state of being is quite intelligible.

<sup>159</sup> "Any soul comes to be just (or the reverse) by having justice (or the reverse), and the presence (παρουσία) of justice in it".

In order to acquire a better understanding of the general phenomenon of 'having a thing' = 'being so-and-so in virtue of the thing had', it is useful to consider the deep structure sense of participles and quasi-participles formed by the suffix Greek '-tos', Latin '-tus', English '-ed'.<sup>160</sup> This suffix is used to form the past participles of weak verbs and participial adjectives to indicate a condition or quality resulting from the action expressed by the verb. Originally the suffix served (and in English is still so)<sup>161</sup> to form adjectives from nouns (e.g. 'bearded', 'booted', 'gloved', 'spectacled', 'two-footed', 'skilled', 'sugared', and so on and so forth), which all indicated an entity endowed (provided) with or characterized by the thing named by the noun, without any reference to a corresponding verb (which in point of fact does not exist at all, e.g. \*'to beard someone').<sup>162</sup> Along this line of thought, the use of ἔξις ('having [x]' = 'being [x]-ed') to stand indiscriminately for both possession and state is perfectly understandable.

(b) Διαθέσις

What has just been said about ἔξις applies to διάθεσις as well. 'Disposition' (διάθεσις) is an important notion in Aristotle's semantics and ontology. Though it is distinguished from ἔξις in that it conveys a different degree of stability and permanence,<sup>163</sup> the two notions are

<sup>160</sup> For Greek and Latin see J. Wackernagel, *Vorlesungen über Syntax: mit besonderer Berücksichtigung von Griechisch, Lateinisch und Deutsch*. Erste Reihe. Basel (1926), 136; 287. P. Chantraine, *Dictionnaire étymologique: Histoire des mots*. Paris (1974), s.v. περτωτός. For Indo-European see A. Meillet, "Les adjectifs grecs en -tos" in *Donum natalicium Schrijnen*. Nijmegen (1929), 639. E. Benveniste, *Noms d'agent et noms d'action en Indo-européen*. Paris (1948), 167. J. Gonda, *Selected Studies*, vol. V: *Indonesian Linguistics*. Leiden (1975), 55f. — For English, H. Marchand, *The Categories and Types of Present-day English Word Formation*. Munich (1969), 264. F.Th. Visser, *A Historical Syntax of the English Language*, vol. II. Leiden (1966), 1223: "Attention must be drawn to the existence in Old English of adjectives derived from nouns by means of the suffix -ede (-ed) [...] connoting the possession or the presence of the attribute or thing expressed by the noun".

<sup>161</sup> F. Th. Visser, *op. cit.* (previous note), 1224: "In Modern English the tendency to create new denominatives of this kind has so much increased that the suffix '-ed' is now added without restriction to any noun from which it is desired to form an adjective with the sense 'possessing', 'provided with', 'characterized by', in spite of the fact that objections to this procedure were repeatedly made by grammarians and non-grammarians". Compare Aristotle's neologism 'ruddered' (7a12: πηδάλιωτόν). The formation by means of the suffix '-τον' is recommended by Aristotle at *Cat.* 7, 7a18-22.

<sup>162</sup> The word 'coloured' is remarkable in that it still has a double function, as (1) participial adjective (as in 'coloured eyelashes') and (2) pure adjective ('coloured people').

<sup>163</sup> *Cat.* 8, 8b27-9a13. It should be noticed, on the other hand, that ἔχειν as

closely related. In the Lexicon (*Met.* Δ 19) it is defined as a special arrangement of a thing's parts:

*Met.* Δ19, 1022b1-3: We call a disposition an arrangement, either by place or capacity or form (εἶδος), of something possessing parts. For it ought to be some sort of position, as even the name 'dis-position' indicates.

This arrangement of parts is not merely topographical. In line with Ancient thought, the right arrangement of a thing's parts is *the* requirement for being well and functioning properly.<sup>164</sup> In modern parlance, too, we speak of someone's 'being well disposed'. As we have seen above, in the next chapter of the Lexicon διάθεσις is explicitly associated with ἔξις, and the excellence of a thing's parts (being in the right proportion and balance, that is) is called a sort of 'having' (Δ 20, 1022b10-14).

Quite in line with the foregoing discussion, 'having a certain disposition' equals 'being so-and-so disposed' and 'being so-and-so in virtue of this disposition'. Along this line of thought, Aristotle (*Top.* VI 6, 145a36-37) says that knowledge is a disposition (διάθεσις) of the soul, and at *Top.* IV 2, 121b38 he calls it ἔξις καὶ διάθεσις. The former passage is most instructive about the proper nature of the relationship of 'having [x]' and 'being [x]-ed':

*Top.* VI 6, 145a34-37: For every disposition and every affection is formed naturally in that of which it is an affection or disposition, as knowledge too is formed in the soul, being a disposition of the soul.

Just as "the knowledge is brought up as knowledge *of* a thing known, and the thing known known *by* knowledge" (*Cal.* 7, 6b34-35), likewise the ἔξις may be termed a ἔξις *of* a 'thing had', and the thing had as 'thing had *by* ἔξις'; the same goes for διάθεσις. In point of fact, this is precisely the explanation presented by the Greek Commentators.<sup>165</sup>

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associated with διάθεσις is only one of the many kinds of ἔχειν; *Cal.* 15, 15b17-19.

<sup>164</sup> Thus 'arrangement' taken as the balanced mixture of opposites in the ideas of health with Alcmaeon of Croton and the Ancient school of medicine is along the same line of thought as the Pythagorean idea of harmony and proportional arrangement of the elements making up physical things. Cf. Aristotle, *Met.* N 5, 1092b8ff. — Compare also the idea of 'animus compositus' ('untroubled by passions') in Stoic thought.

<sup>165</sup> E.g. Porphyry, CAG IV-1 p. 112<sup>25-32</sup>. Ammonius reads (CAG IV-6, p. 68<sup>14-19</sup>): 'Ἐκτιθέμενος τὰ παραδείγματα τέχνας ἡμῖν παραδίδωσι τῆς ἀνακάμψεως ['property of being converse'] τῶν πρὸς τι· ἡ γὰρ ἔξις ὅπερ ἐστὶ πρὸς γενικὴν ἀποδίδεται (ἐκτοῦ γὰρ λέγεται ἔξις) καὶ ἀνάπαλιν τὸ ἐκτὸν ἔξει ἐκτόν ὃ ἐστὶ πρὸς δοτικὴν ἀποδίδεται, καὶ ἡ διάθεσις ὁμοίως διαθετοῦ διάθεσις καὶ τὸ διαθετὸν διαθέσει διαθετόν, καὶ ἡ ἐπιστήμη ἐπιστητοῦ ἐπιστήμη καὶ τὸ ἐπιστητὸν ἐπιστήμη ἐπιστητόν.



In their wake Boethius's comments on the issue run as follows:

*In Arist. Cat.*, col. 219A8- 15, ed. Migne: Dispositio namque dispositae rei dispositio est, et disposita res dispositione disposita est. Caloris enim dispositio calentis, idest ad calorem dispositi, dispositio est; eodem modo dispositus ad calorem caloris dispositione dispositus est. Velut si hoc modo sit assertibile: omnis affectio affecti affectio est, et omne affectum affectione affectum est; et calor calentis fit calor, et calens calore fit calidum.

One final question should arise about the classification of ἕξις and διάθεσις as modes of relational being: this feature seems to imply that their possessors are not something in themselves in virtue of their own being. But what should we say, then, about the fact that Aristotle counts what is viewed as relational being among modes of qualitative being, something he clearly claims in the opening lines of chapter 8: “one kind of qualitative being let us call ἕξις and διάθεσις” (8b26-27)? The answer is given at the end of the chapter, where Aristotle sets out to clearly distinguish between ἕξις and διάθεσις as taken generally (‘generically’) on the one hand, and when specified by their correlative, as an intrinsic object on the other:

*Cat.* 8, 11a20-36: You should not be disturbed lest someone may say that though we proposed to discuss qualitative being we are counting in many modes of relational being, given that ἕξεις and διάθεσις are among the modes of relational being. For in practically all such cases the generic modes are spoken of *in relation to* something, but none of the particular cases (τῶν δὲ καθ’ ἕκαστα) is. For knowledge, a genus, is brought up as just what it is, *of* something else — it is spoken of as ‘knowledge *of* something’ — but none of the particular cases is brought up as just what it is, *of* something else. For example, grammatical knowledge is not spoken of as ‘grammatical knowledge of something’, nor musical knowledge as ‘musical knowledge of something’. If at all it is in virtue of the genus that these too are spoken of in relation to something: grammatical knowledge is called ‘knowledge of something’, not: ‘grammatical knowledge of something’, and musical knowledge ‘knowledge of something’, not: ‘musical knowledge of something’. Thus the particular cases are not modes of relational being. Now it is in virtue of the particular acquaintances (‘cognitions’) that we are called ‘qualified’, for it is these which we possess — it is because we have some particular knowledge that we are called knowledgeable. Hence these — the particular cases, in virtue of which we on occasion are said to be ‘qualified’ — would indeed be modes of qualitative being. And these do not belong to the modes of relational being.

This important distinction bears on the different ways of calling up the things of the outside world. If we are talking about, say, Socrates’s

knowledge of grammar, what is indicated is a quality ('mode of qualitative being') of his, which can be brought up as just what-it-is (ὅπερ ἐστίν), just by itself, without any reference to something extrinsic, obviously, since in this case the intrinsic 'thing' implied in the generic relational being, 'knowledge', has already been made explicit by the addition 'of grammar'. Therefore there is no need to look for a correlate in the above sense: knowledge of grammar is, by definition — not by implication — grammatical, and grammar is not its correlate, but its very content and nature.

Incidentally, this passage once again contains an explicit reference to the ratio of categorization and focalization. It is on certain occasions, Aristotle says (8, 11a34), that we are called somehow 'qualified', in virtue, that is, of a particular knowledge, thus implying that, on other occasions, we may be brought up in virtue of some other modes of being of ours.

Returning now to the opening paragraph of our chapter (6a36-b10), in sum it is all about relational names and the modes of relational being brought up by them. What Aristotle is trying to make clear is that whenever you use a relational name ('son of', 'master of'), you are *eo ipso* implying its correlative, and, accordingly, bringing up the correlate thing signified by it generically ('a father', 'a disciple'). Likewise (taking up the second group of modes of relational being, indicated at 6b2-3), when you speak of a ἔξις (a mode of having), you (1) will unavoidably refer (through its correlative name) to a ἐκτόν ('thing had'), and (2) conversely, when you speak of a 'thing had', your speaking of a ἔξις is implied.

Statement (1) is made against Plato: there is no ἔξις without a concrete ἐκτόν. And that the purport of (2) can hardly be in keeping with Platonic doctrine either may appear from Boethius's final sentence (219A15-16): "The heat, therefore, is the (particular) heat of the hot thing, and the hot thing gets hot by the (particular) heat". Any Platonic χωρισμός is thus abandoned.

In Boethius's examples another important feature comes to the fore. When one uses a relational designation generically ('son of', 'master of'), one is, as we have seen just now, *eo ipso* implying its correlative and, by the same token, the correlate entity. However, as soon as the designation is actually applied to a particular case, calling e.g. Socrates 'son of Sophroniscus' or 'master of Plato', the designation no longer acts as a relational one, but merely refers to another mode of being ('ontic aspect') of his, among which are the

qualitative modes. This is precisely the purport of the final section of the chapter on qualitative being, which we discussed above (11a20-36): in particular instances of knowledge, there is, properly speaking, no question of relational being in the sense of chapter 7. If you like, you may treat a particular case (e.g. grammatical knowledge) from the generic point of view, by considering it a relational mode of being ('knowledge *of* something'), but you are still not allowed to view grammatical knowledge as relational being ('*grammatical* knowledge *of*'); it is merely qualitative being pertaining to a particular entity which is endowed with it. "Moreover, if the same mode of being — Aristotle reassures the reader — happens to be both qualitative and relational there is nothing absurd in its being counted in both the genera" (= 'categories'; 11a37-38). And this stands to reason, since what it is all about is focalization and categorization, i.e. the different ways of calling up one and the same thing, in accordance with the different modes of inherence in — it should be stressed once again — one and the same thing.

(c) θέσις

The fifth candidate of the list of types of relational being pertaining to the second group (6b2-3) is θέσις ('position' or 'posture'). The argument in support of this classification of θέσις to the modes of relational being (6b5-6) is that thesis too is a thesis *of* something. The Greek Commentators, and in their wake Boethius as well, speak of the θέσις of a θετόν ('what-is-posit-ed') and a θετόν θέσει θετόν ('posit-ed posit-ed by position').<sup>166</sup> We are told that these formulas should be taken in the same way as those concerning ἕξις and διάθεσις.<sup>167</sup>

Gillespie has aptly observed<sup>168</sup> that all these types of relational being seem to bear on human or animal beings. So θέσις is simply 'posture', practically synonymous with σχῆμα as used in medical treatises. It only applies to complex animal bodies, with mobile limbs controlled by voluntary effort.<sup>169</sup> So it need not come as a surprise

<sup>166</sup> Porphyry, CAG IV-1, p. 112<sup>31</sup>, 113<sup>10-11</sup>; Simplicius, CAG VIII, p. 165<sup>1-2</sup>; Boethius, *In Arist. Cat.*, col. 219A.

<sup>167</sup> Boethius, *op. cit.*, 219A-B: "Positio quoque relativa est, nam positio positae rei positio est, et posita res positione posita est. Et hoc intelligi convenit secundum priorem habitus et dispositionis modum. Illa quoque res probat positionem esse *ad aliquid* quod eius species relativae sunt: statio enim stantis rei statio est, et qui stat statione stat. Et de sessione quidem et de accubitu idem dici potest".

<sup>168</sup> Gillespie (1925), 70ff.

<sup>169</sup> Gillespie (1925), 9-12.

that the Greek Commentators take θετόν as an animal body (σῶμα), and its species as ‘recumbent posture’ (ἀνάκλισις), ‘upright posture’ (στάσις), and ‘sitting posture’ (καθέδρα) of the body. Hence Aristotle’s elucidation about θέσις should be rendered thus:

*Cat.* 7, 6b11-14: Recumbent posture, upright posture, and sitting posture are particular postures. Posture <itself> is among the modes of relational being, while to be in a recumbent posture (τὸ ἀνακεκλίσθαι), to be in an upright posture (ἐστάναι), or to be in a sitting posture (καθῆσθαι) are themselves not postures, but they get their names paronymously from the aforesaid postures.

In their comments upon this passage, the Greek Commentators commonly claim that whoever stands stands in virtue of στάσις, whoever sits is seated by καθέδρα, and so for ἀνάκλισις, where, of course, στάσις, καθέδρα and ἀνάκλισις are to be taken as immanent (coincidental) forms.<sup>170</sup> This appears once more in the pseudo-Aristotelian *Problemata* (whose doctrine represents Peripatetic thought), where it is said that “weight being concentrated in one place in the sitting or recumbent posture (ἐν τῇ καθέδρᾳ ἢ κατακλίσει) causes pain owing to the pressure”.<sup>171</sup>

In keeping with what has been said about knowledge, perception, ‘having’, and disposition, including the discussion of 11a20-36, Aristotle claims that the perfective verbal forms ἀνακεκλίσθαι, ἐστάναι, and καθῆσθαι, which are used to stand for someone’s actually having this particular posture, are non-relational forms constitutive of a coincidental property inhering in this subsistent entity. The generic notions of ἀνάκλισις, στάσις, and καθέδρα, on the other hand, each being a θέσις, generically refer to a mode of relational being, and so include the notion of the correlate of the respective θέσις, viz. the θετόν, to wit, animal body.

In our passage, the distinction between generic relational being and its non-relational specifications is addressed by Aristotle in a

<sup>170</sup> E.g. Porphyry, CAG IV-1, p. 113<sup>13-16</sup>. The Greek Commentators even say that, after its respective postures, the body itself is called στάσις, ἀνάκλισις or καθέδρα; Ammonius CAG IV-6, p. 68<sup>23-25</sup>: ἡ γὰρ ὅλον τὸ σῶμα ὀρθόν ἐστι καὶ καλεῖται στάσις, ἡ ὅλον πλάγιον κεῖται καὶ καλεῖται ἀνάκλισις, ἡ μέρος μὲν τι αὐτοῦ ἵσταται μέρος δὲ κέκλιται καὶ καλεῖται καθέδρα. Cf. Olympiodorus CAG XII-1, p. 102<sup>7</sup>; Philoponus CAG XIII-1, p. 107<sup>9</sup>. On the other hand, Elias CAG XVIII-1, p. 208<sup>9ff</sup>. goes as far as to refuse to call καθέδρα, ἀνάκλισις, and στάσις kinds of θέσις any longer, because, in his view, what is partaking is also what is partaken of (μετέχον ἐστὶ καὶ μετεχόμενον), and thus the distinction between the two of them as correlatives is futile.

<sup>171</sup> *Problem.* V 11, 881b29-31 = Theophrastus, *De lassitudine*, cap. 9.

manner somewhat different from 11a20-36,<sup>172</sup> by saying that, though an individual's actually being in an upright (or sitting or recumbent) posture is itself not a relational mode of being, it gets its name paronymously from the corresponding posture. This move in the argument makes clear that in Aristotle's view, the particulars ('specifications') of a generic mode of relational being ('musical knowledge', 'being so-and-so disposed', 'being in a recumbent posture', and the like) are as many individual properties immanent in particulars. All this is in perfect consonance with the general lines of Aristotelian semantics and ontology:<sup>173</sup> when actually applied to the outside world, some specific names signifying certain coincidental modes of being (like 'white', 'generous') refer to individual properties ('being white', 'being generous') qua inhering in individual subsistent entities and, by way of paronymy, to the subsistent individuals themselves (the white or generous <things>), while, when understood in their generic connotation ('whiteness', 'generosity'), they can only be spoken of meaningfully if they imply an inherence in some particular.

#### 4. 65 *Why should the correlates 'reciprocate'?*

In a subsequent section (6b28-36), Aristotle claims that any mode of relational being is spoken of in relation to a reciprocating correlate. So the slave is brought up as slave *of a master*, and a master as master *of a slave*; likewise the double as double *of a half* (and the other way round), and the larger as larger *than the smaller*, and so on. Sometimes, however, the reciprocity is expressed by a Greek formula using different endings of the same root, e.g. calling knowledge 'knowledge of the <thing> known', and its correlate, thing known, 'thing known by knowledge'.

Ackrill (100) rightly remarks that when he speaks of reciprocity, Aristotle is in fact discussing *converse* relations, so that e.g. 'parent' and 'child' reciprocate, but 'parent' and 'son', and 'father' and 'child' do not. Hence it is important for us that when we use relational names in a discussion, we should present their *converse* correlate. A mistake is easily made in this respect. For example, if a wing is brought up as 'of a bird' things are not expressed properly, since 'bird of a wing' is not 'a correlate that reciprocates', in the sense

<sup>172</sup> Compare what is claimed at 11a28-31 about the particulars of knowledge, grammatical and musical knowledge.

<sup>173</sup> My sections 1.71, and 2.71; 9.63; 9.71; 10.71; note the Rules RMA and RSC.

intended at 6b28. In fact, ‘wing’ is conversely related to ‘winged’, and so these two have a relation that reciprocates, not ‘wing’ and ‘bird’. If a thing’s mode of relational being is given properly by calling it ‘winged’ there is reciprocity, calling up, that is, a wing as ‘wing of a winged’, and a winged as ‘winged by a wing’ (6b36-7a5).

Sometimes, Aristotle continues (7a5-22), it may be necessary even to invent names, if there is no name in relation to which a thing can be brought up properly under the very ontic aspect we wish to present it. Supposing, for instance, a rudder is brought up as ‘of a boat’, then it is not brought up properly, since the rudder’s proper correlate is not ‘boat’ — there are indeed boats without rudders — but something furnished with rudders. So you have to coin the neologism ‘ruddered’, “since there is no established name” (7a12-13). Only in this way, is there proper reciprocity, for a ruddered is ‘ruddered by a rudder’. Likewise a head would more properly be correlated with ‘headed’ than with ‘animal’, because it is not *qua* being precisely an animal that a thing has a head (again, many animals do not have one). The present paragraph winds up with the recommendation that we should form the appropriate names by means of the suffix ‘-ton’, which in Greek (as in Indo-European) can be added to nouns so as to express the notion ‘endowed with [x]’ or ‘[x]-ed’.

Provided the names are correctly used (or formed), it can be claimed (7a22ff.) that all relational beings are spoken of in relation to correlates that reciprocate. Aristotle repeatedly stresses that we should give the names properly, which means that the appropriate names should also be given to the thing under examination if they apply to it in virtue of itself, not in virtue of a feature coming to it coincidentally or, as Aristotle has it, “as related to some chance thing” (ἐάν γε πρὸς τὸ τυχὸν ἀποδιδῶται; 7a24):

*Cat.* 7, 7a22-31: All modes of relational being, then, are spoken of in relation to correlates that reciprocate, provided they [i.e. the latter] are properly given. For, of course, if relational being is given as related to some chance thing, and not to just that in relation to which it is itself brought up,<sup>174</sup> there is no reciprocity. What I mean to say is this: even with modes of relational being that are admittedly spoken of in relation to correlates that reciprocate and for which names are available, none reciprocates if relational being is given as related to something coincidental <to the entity under discussion>, and not to just that in relation to which it is itself brought up. For example, if a

<sup>174</sup> Note the grammatical attraction in πρὸς αὐτὸ ὃ λέγεται (for: πρὸς αὐτὸ τοῦτο πρὸς ὃ λέγεται).

slave is called up as — not of a master, but — man or biped or anything else like that, there is no reciprocity; for <the correlate> has not been given properly.<sup>175</sup>

From the examples it is plain that it is  $[x]$ 's correlate (the  $[y]$  'of which' it is) that should be brought up properly. That is to say, supposing Cleon is the slave of master Callias: if Cleon is brought up as  $[x]$ , viz. 'slave', by calling him 'this slave', Callias ought to be brought up by using the name  $[y]$  that precisely designates him in his (converse) relationship to Cleon, taken as his slave, not by assigning to him any other name, ' $[a]$ ', ' $[b]$ ', ' $[c]$ ' ('e.g. man', 'animal'), and so on, however truly Callias may be designated as  $[a]$ ,  $[b]$ , or  $[c]$  etc. Therefore, when he claims at 7a22 that πάντα τὰ πρὸς τι (assuming that they are properly given) are brought up in relation to correlates, Aristotle seems to loosely apply the proviso to the correlates (ἀντιστρέφοντα), rather than to the initial relational names and significates. Hence the modes of relational being are always spoken of in relation to reciprocating correlates, provided these correlates are properly given.

As to the expressions 'chance thing' and 'something coincidental', Aristotle uses them from the semantic point of view, not in terms of ontology. In other words — in view of the aforesaid examples — Aristotle obviously does not mean to say that it is coincidental to Callias to be a man or a biped, which would be absurd. What is meant is that if you bring up Cleon as 'slave', you have to call his counterpart, Callias, 'master', not 'man' or 'biped', since his being man or biped is coincidental to his being Cleon's master, and his being man or biped only coincides with his being the master of the slave, Cleon.<sup>176</sup>

The importance Aristotle ascribes to applying the correct semantic procedure can hardly be overestimated. In the subsequent lines (7a31-b9), the author goes on to elucidate this procedure in more detail, by explaining the method of stripping off whatever is coincidental to the correlate's being the precise converse of the mode of relational being under examination. Again, he warns us not to use inappropriate names, however true they may be otherwise. For example, if a slave is spoken of in relation to a master, then, when everything coincidental to being a master is stripped off — such as

<sup>175</sup> Cf. *Top.* VI 12, 149b4-23.

<sup>176</sup> This use of 'coincidentally' (κατὰ συμβεβηκός) is in perfect keeping with its other occurrences throughout Aristotle's work. De Rijk (1980), 26-33, and my *Index* s.v. συμβεβηκός.

being a biped, being capable of knowledge, being a man<sup>177</sup> — and only its being a master (τοῦ δεσπότην εἶναι) remains, a slave will still (ἄεί)<sup>178</sup> be spoken of in relation to precisely that; for a slave is called slave *of* a master (7a31-b1).<sup>179</sup>

The procedure of elimination is also useful for exposing cases of erroneous naming. If that thing [y] in relation to which a thing, [x] is spoken of, is not properly given, then, when the other things — that is to say, including the appropriate designation — are stripped off and that alone is left to which it was — wrongly — given as related, it [x] will turn out not to be spoken of in relation to [y]. Suppose, for instance, a slave (Cleon) is brought up as ‘*of* a man’ and a wing as ‘*of* a bird’, and you are going to strip off his ‘being a master’ (τὸ δεσπότην αὐτῷ εἶναι) from the man (Callias), then it will no longer be a *slave* that is spoken of in relation to a man, for if there is no master there is no slave either (7b1-7).

The section winds up with a summary of the required procedure of naming when it comes to establishing the appropriate reciprocating correlate:

*Ibid.* 7, 7b10-14: One must therefore give as <a thing’s> correlate that which at each occasion (ποτε)<sup>180</sup> it is properly spoken of in relation to; and if a name is already available the assignment is no problem, but if it is not it is of course (ἴσως)<sup>181</sup> necessary to invent a name.

<sup>177</sup> As early as in *Cat.* the expression τὸ δίποδι εἶναι (7a36-37) and the like are used, alongside expressions that do not use the dative (e.g. 1b20: τῷ δίποδους εἶναι; cf. 7a38; 7b5).

<sup>178</sup> For ἄεί denoting persistence, cf. Van Raalte, 134.

<sup>179</sup> In the context of this chapter, this means: for he (e.g. Cleon) who is brought up as ‘slave’ is so called in virtue of his relation to a master (Callias). That is why the slave’s correlate, Callias, must be brought up as ‘master’, not as ‘being a man’, ‘being a biped’ or ‘being capable of knowledge’, since all these properties of his (though they are essential) are merely coincidental to his being man, biped etc. This ‘singling out’ of the appropriate mode of being by stripping off the inappropriate ones is typical of Aristotle’s philosophical investigations, too. At *EN* VIII 11, 1161b3-6 Aristotle claims that there can be no friendship between a master and his slave qua slave, although there can be friendship with him qua human being. See also my section 13.2.

<sup>180</sup> On each occasion, that is, when something is brought up, at one time as ‘being a slave *of*’, at another time as ‘being a larger *than* thing’, at still another as ‘being the double *of*’ etc. For this distributive use of ποτέ see my section 12.33.

<sup>181</sup> The addition of ἴσως in itself does not necessarily weaken the force of an expression. Bonitz, *Index*, 347b32-4: “saepe ἴσως non dubitantis est, sed cum modestia quadam asseverantis”; the same applies to the English ‘perhaps’ for that matter. Van Raalte rightly points out (127) that in ‘programmatic’ texts the phrase ἀνάγκη/ἀναγκαῖον ἴσως introduces what is considered the appropriate way of proceeding concerning the subject matter involved. She refers to Aristotle, *An.* I 1, 402a23, and *Iuvent.* 1, 467b11.



When correlates are given thus, it is clear that all modes of relational being will be spoken of in relation to correlates that reciprocate.

#### 4. 66 *On reciprocation as to implication of 'being given'*

A final remark should be made about what reciprocity comes to. When in chapter 12 the notions of priority and posteriority are discussed, one of the occurrences of 'being prior to something' is described from its opposite, the ἀντιστρέφον, which is itself taken as 'what reciprocates as to implication of being given':

*Ibid.* 12, 14a26-35: One thing is called prior to another in four ways. Firstly [...]. Secondly, what does not reciprocate as to implication of being given (κατὰ τὴν τοῦ εἶναι ἀκολουθήσιν). For example, one is prior to two because if there are two it follows at once that there is one, whereas if there is one there are not necessarily two, so that the implication of the other's being given does not hold reciprocally from one. Now that from which the implication of being given does not hold reciprocally is thought to be prior.

Some lines further on, a variant of this priority is considered, which concerns an interesting case of causal priority, viz. the priority of 'the state of affairs expressed by an assertible being the case' over 'this assertible being true':

*Cat.* 12, 14b11-22: Of things that reciprocate as to implication of being given, that which is in some way the cause of the other's being might reasonably be called 'prior by nature'. And that there are some such cases is clear. For there-being-a-man reciprocates as to implication of being there with the-assertible's-about-its-being-true: if a-man's-being-there is the case, the assertible whereby we say that-a-man's-being-there is the case is true; and reciprocally so, since if the assertible whereby we say that-a-man's-being-there is the case is true, then a-man's-being-there is the case. But whereas the assertible being true is in no way the cause of the state of affairs's (τοῦ εἶναι τὸ πρᾶγμα) being the case, the state of affairs does seem in some way the cause of the assertible's being true: it is because the state of affairs is, or is not, the case that the assertible is called true or false.<sup>182</sup>

In chapter 13, which deals with simultaneity, the reciprocity as to implication of being once again comes up for consideration. This time, after simultaneity 'in an unqualified and most strict sense' (ἀπλῶς καὶ κυριώτατα) has been identified as the simultaneity of those things which come into being at the same time, a mode of

<sup>182</sup> For the intricate issue of truth and falsehood see my section 8.4 in Vol. II.

relational being and its correlate are instanced to explain another sense of 'being simultaneous':

*Ibid.* 13, 14b27-33: Those things are called 'simultaneous by nature' which reciprocate as to implication of being given, provided that neither is in any way the cause of the other's being given. For instance, the double and the half; these reciprocate, since if there is a double there is a half, and if there is a half there is a double, but neither is the cause of the other's being given.

The priority of genera over their species is also argued (15a4-7) from the fact that unlike co-ordinate species of the same genus (14b33-15a4), the former do not reciprocate as to implication of being there. E.g. if there is a fish there is an animal, but if there is an animal there is not necessarily a fish. The chapter is summarized as follows:

*Ibid.* 13, 15a8-12: Thus those things are called (up as) simultaneous by nature which reciprocate as to implication of being given, provided that neither is in any way the cause of the other's being given; and also co-ordinate species of the same genus. And simultaneous in an unqualified sense are things which come into being at the same time.

From these passages the following points can be gathered:

(1) Reciprocity as to implication of 'being given'<sup>183</sup> is always taken as a logical relationship between beings which are given by the same token, and so is opposed to things with temporal co-existence. Thus, 'double' and 'half' reciprocate in this sense because once 'double' is given, *eo ipso* 'half' is too, and the other way round. On the other hand, 'one' and 'two' do not reciprocate, since although there is necessarily 'one' if there is 'two', the converse does not hold, so that there is only a one-sided implication.

(2) In fact, this reciprocity is what we might call 'logical equivalence'. The feature of 'being given by the same token' is given due emphasis by its being opposed to ontological co-existence at 14b24-25, where this co-existence is explained in terms of *coming into being* (γένεσις) at the same time, not just by coincidence. Thus the *eo ipso* character of the relationship plainly comes to the fore.

Before we discuss the impact of the requirement of reciprocating as to implication of being given, we should first consider another,

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<sup>183</sup> The common rendering of εἶναι in the phrase 'as to implication of εἶναι' 'existence' is suggestively misleading, inasmuch as it refers to real existence and seems to exclude cases of merely mental (or logical) 'being given'. For this reason, I prefer the neutral 'being given', which indiscriminately may stand for real existence in the outside world and other cases of being there.

matching property which is indispensable for us in order to talk about a genuine correlate to a mode of relational being.

#### 4. 67 *The requirement of simultaneity by nature*

In 7b15ff. Aristotle goes on to discuss a cognate property of relational things (τὰ πρὸς τι), viz. their being simultaneous by nature. The phrase τὰ πρὸς τι in this passage stands for the modes of relational being *including* their genuine correlates. Unlike the reciprocity spoken of in the previous few sections, their natural simultaneity is to be taken as the temporal co-existence of the actual mode of relational being [x] inhering in, say, Cleon, and its correlate mode of being [y] in Callias. The examples given are illuminating enough: when there is a slave there is a master, and the other way round. The removal of these modes is equally simultaneous: given that there is no slave, there is no master either, and the other way round. The same applies to all other such cases (7b15-22).

There seem to be exceptions to this rule (7b22-8a12). They concern knowledge and perception. The issue is rather intricate, since in the contradistinction ἐπιστήμη--ἐπιστητόν the latter term seems to be used for 'the knowable', rather than 'what is known'<sup>184</sup> — as was the case before (6b33-36), when the requirement concerning the genuine correlate ('logical equivalence') was considered. The problem is set out extensively by Aristotle:

*Cat.* 7, 7b22-35: Yet it does not seem to be true of all modes of relational being that they are simultaneous by nature. For what is known would seem to be prior to its being known. For as a rule it is of pre-existing things that we acquire knowledge; in few cases, if any, could one find knowledge coming into existence at the same time as what is known. Moreover, destruction of what is known carries knowledge to destruction, but knowledge does not carry what is known to destruction. For if there is not a thing known there is not knowledge either — there will no longer be anything for knowledge to be of — but if there is not knowledge there is nothing to prevent there being a thing that can be known. Take, for instance, the squaring of the circle, supposing it is something to be known; knowledge of it does not yet exist, but what is to be known itself exists. Again, if animal is destroyed there is no knowledge, but there may be many things to be known.

<sup>184</sup> Ackrill renders 'knowable'; cf. Oehler (1984), *ad loc.* Tricot more cautiously has 'l'objet de la science'. I would like to stick to the rendering 'what is known' as long as I can.

In the subsequent lines (7b35-8a12), it is argued that the case of sense-perception is similar to that of knowledge: the αἰσθητόν, too, seems to be prior to perception. For instance, fire and water, and so on, of which an animal capable of perceiving is itself made up, exist even before there exists an animal at all, and, consequently, prior to any sense-perception.

In this passage the pre-existing ἐπιστητόν or αἰσθητόν should not be understood as exclusively indicating extramental things possessing knowable properties, but rather that which is to be known or perceived about them. This is manifest from 8a5-6, where besides body, properties like hot, sweet, and bitter are instanced as entities to be perceived ('perceptibles'). As for sense-perception, then, one has to realize that to Aristotle, the objects of the outside world are themselves only coincidentally the objects of sense-perception; the proper sensibles are those features of a thing which are proper to one of the senses or to sense-perception acting as such in its general capacity.<sup>185</sup> Therefore when it is argued at 7b35-8a12 that, although what is perceived and perception are relational beings, the former is prior, this does not alter the fact that the αἰσθητόν qua perceived property is, by definition, naturally simultaneous with the act of perception.<sup>186</sup>

In *An.* III 2, the problem concerning the priority issue is solved in terms of the distinction between actuality and potentiality, which, however, does not affect the essential sameness of the ἐνέργεια of the αἰσθητόν and the act of sense-perception:<sup>187</sup>

*An.* III 2, 425b25-426a1: The actuality of the thing perceived <qua perceived> and that of the sense-perception involved<sup>188</sup> is one and the same, though their formal being is not the same. In saying that they are the same, I am speaking of actual sound and actual hearing; for it is possible for one who possesses hearing not to hear, and that which has sound is not always sounding. But when that which has the power of hearing is exercising its power, and that which can sound is actually sounding, then the actual hearing and the actual sound are produced simultaneously, and you may say that one is audition (ἄκουσιν), the other sonance (ψόφησιν).

*Ibid.*, 426a6-15: The actuality, then, of the object producing sound is sound or sonance, and of that producing hearing is hearing or

<sup>185</sup> *An.* II 6, 418a6-25; Guthrie VI, 291-307.

<sup>186</sup> Cf. *Met.* Γ 5, 1010b30-1011a2; my section 7.79. At *Met.* I 6, 1057a7-12 the priority issue is forwarded in a fashion similar to *Cal.* 7, 7b22ff.

<sup>187</sup> Ackrill, 100f.

<sup>188</sup> My rendering of the definite article. See Kühner-Gerth I, 593, and Verdenius (1981), 351.

audition; for 'hearing' is used in a twofold sense, and so is 'sound'. [...] In some cases we have names for both phenomena, such as 'sonance' and 'audition', but in others one has none; for the actuality of sight is called seeing, but that of colour has no name, and the actuality of taste is called tasting, but that of flavour has no name.

The subsequent lines suggest that by distinguishing between actuality and potentiality Aristotle is able to solve a problem which baffled the early philosophers:

*Ibid.*, 426a15-27: Now since the actuality of the sensible and that of the sensitive are one actuality, though they differ in formal being, it follows that hearing in this sense [i.e. of actuality] must cease or endure simultaneously with the sound; and likewise with flavour and taste and the rest. But this does not apply to them when they are taken as potentialities (κατὰ δύνανμιν). The earlier students of nature were at fault in this, supposing that being white and being black do not occur without sight, nor flavour without taste. In one sense they were right, but in another wrong. For since 'sense-perception' and 'what is perceived' are used in a twofold sense, viz. potentially and actually, their sayings apply to the latter class, but not to the former. These thinkers spoke in an unqualified sense about things that are spoken of in an absolute sense.<sup>189</sup>

The core of the argument is Aristotle's use of the notion of ἐνέργεια, which is characteristic of his ontology. This term does not stand for just 'activity'; it rather indicates a kind of internal activity, or 'self-contained activity', 'self-development', 'self-realization' or 'actualization',<sup>190</sup> all of them as opposed to κίνησις, which is an external activity. As a matter of fact, in *Met.* Θ 6, Aristotle defines (1048b6-8) ἐνέργεια (actuality) not only in opposition to potentiality (δύναμις), but also as essence taken in its relation to what we may call 'matter' (πρὸς τινὰ ὕλην). In Θ 8, 1050a22, the notions of 'dynamic activity' and 'complete reality' are significantly found together, and in the same line of argument is the equation of actuality and οὐσία or εἶδος (1050b2-3).

Ross remarks (II, 245, re *Met.* 1047a30) that from 1050a22 it appears that strictly speaking ἐνέργεια means activity or actualization, whereas ἐντελέχεια means the resulting actuality or perfection, and

<sup>189</sup> Cf. *Met.* Θ 5, 1048b9-34.

<sup>190</sup> Compare the use of the cognate term ἐντελέχεια; *Met.* Θ 3, 1047a30-32: "The name 'actuality' (ἐνέργεια) — I mean the actuality we connect with complete reality (ἐντελέχειαν) — has, in the main, extended from movements to other things; for actuality is thought to be movement, in the main. For the use of ἐνέργεια in the discussions about the verb in the Ancient grammarians see Van Ophuijsen (1993), 752ff.

yet that ἐνέργεια is not a movement towards something other than itself. I can fully agree with Ross's latter observation, but I do not go along with him when he opposes ἐνέργεια to ἐντελέχεια. It rather seems that, just as English 'actualization' both refers to the act of actualizing and the effect ('being actualized'), likewise ἐνέργεια is indiscriminately used to stand for both the act and the result — the more so, as it is the same dynamic *eidos* that both performs the (continuous) act and maintains the product. Thus in one of its main aspects, ἐνέργεια is ἐντελέχεια. So the characterization of ἐνέργεια is introduced by associating the words τέλος, ἔργον, and ἐνέργεια:

*Met.* Θ 8, 1050a21-23: The activity (ἔργον) is the end (τέλος), and the actualization (ἐνέργεια) is *the* activity. And so even the word ἐνέργεια is derived from ἔργον, and tends to mean the same as ἐντελέχεια ('actualization' in the sense of 'complete reality').

Interestingly enough, it is precisely by playing on this ambivalence of ἐνέργεια that Aristotle explains the equation of exercise (χρήσις) and its ultimate end, as far as activities like seeing, contemplating or living are concerned:

*Ibid.* 8, 1050a23-b3: While in some cases the exercise is the ultimate thing — for example, in sight the ultimate thing is seeing, and no other product besides this results from sight — but from some things something else is produced, as from the art of house-building there results, external to the act of house-building, a house, yet none the less the actualization is in the former case the end and in the latter still more of an end than the potency is. For the act of house-building is found in the thing that is built, and it is simultaneous with the house that comes into being and is. Where, then, the result is something external to the exercise, the actualization is in the thing that is being made — e.g. the act of house-building is in the house that is being built [...]; and in general the movement is in the thing that is being moved. — But where the whole activity is contained in the actualization, the actualization is present in the agents themselves, e.g. the act of seeing in the seeing subject, and that of contemplating in the contemplating subject, as also life is in the soul [qua vital principle]. [...] Hence it is plain that the essence or *eidos* is actualization.

It is in this vein that the natural simultaneity of 'knowledge' ('knowing') and 'thing known' must be considered. Since knowing, perceiving and so on pertain to the acts in which the whole activity is contained in the actualizations themselves, knowing [*x*] as a whole is accomplished within the knowing agent, and the object, [*x*], consequently, is [*x*] qua being known and present in the agent, not the outside thing, [*x*]. Thus the simultaneity by nature of knowledge and

thing actually known, and perception and thing perceived is warranted. To mark off the outside entity, [x] as already existent before it is actually known from knowledge, can only occur in terms of the actual-potential dichotomy.

#### 4. 68 *Relational being as discussed elsewhere. Aristotle vs. Plato*

It may be of some avail to consider Aristotle's exposition of relational being outside *Cat.*, and to put his doctrine in the context of his rebellion against the basic tenets of Plato's metaphysics.

In the *Lexicon*, *Met.* Δ chapter 15, Aristotle also presents a discussion of relational being, which is pretty well in keeping with what is said in *Cat.* (*pace* Kirwan, (1971, 164-7) who claims that this chapter has little in common with the treatment in *Cat.*, ch. 7). In point of fact, three kinds of πρὸς τι things are distinguished in *Met.* Δ 15:

(a) those of the κατ'ἀριθμὸν type, i.e. those that are "numerically expressed and are of a numerical nature", such as 'double-half'; they are discussed at 1020b26-28 and 1020b32-1021a9;<sup>191</sup>

(b) those of the act-potency type, i.e. those that are called relational with reference to their capacity of acting and undergoing, respectively, including the actual exercise of these capacities: 1020b28-30; 1021a14-15;

(c) those of the ἐπιστήμη-ἐπιστητόν type: 1020b30-32; 1021a29-b3.

The groups (a) and (b) are clearly to be equated with the first group mentioned at *Cat.* 7, 6a36-b2, of which (b) is merely a special sub-group of the first group mentioned at 6a36ff. The relationals belonging to our (c) are the same as the ones instanced of the second group of *Cat.* 7 (6b2-14). At *Met.* 1021a26-28, the members of (a) and (b) are all characterized as relational from the viewpoint of their being brought up as just what they are *of* something else, not after the other thing that is relational to them. This may be compared with *Cat.* 7, 6a36-37 and 8a31-32. The πρὸς τι things belonging to our (c), on the other hand, are relational in that they are called just what they *are* after the other thing that is relational to them (1021a28-30).

As for naming, our (a) and (b) contain things whose names refer to correlate names and things, such as does 'double' to 'half' or 'what heats' to 'what is heated', and the other way round (1021a17-18). As for the members of our (c), on the other hand, the relationship is

<sup>191</sup> For an examination of numerical and number-like relationals in terms of mathematical ratios see Heath (1949), 209-11; Kirwan (1971), 164.

one-sided: the thing thought implies that there is thinking of it, but thinking is not in the same manner related to the thing it is a thought of.

The survey at the end of the chapter is presented from the broader angle of naming; some things are brought up by names that convey an essential relationship, others by names that convey a thing's feature which as such only coincides with a mode of relational being:

*Met.* Δ 15, 1021b3-11: Of things brought up as relational in their own right (καθ' ἑαυτὰ λεγόμενα), then, some are so called in the aforesaid ways; others, if their genera are of those kinds. As, for example, 'being skilled in the medical art'<sup>192</sup> is among the modes of relational being because its genus, knowledge, is thought to be relational; again, all those things with reference to which their possessors are brought up as relational, e.g. 'being equal' (ἰσότης) because the equal thing <is so called with reference to its property, equality>, and 'being similar' (ὁμοιότης) because the similar thing <is so called with reference to its property, similarity>.<sup>193</sup> Other things <are brought up as relational> coincidentally. For instance 'being'<sup>194</sup> a man' is relational because 'being double' coincidentally comes to him, and that is among the modes of relational being; or 'being pale' if being both double and pale comes to the same thing.

Thus the main division here is into (1) things indicated by relational names in virtue of the very nature conveyed by this name (they are mentioned at 1021b3-8), and (2) things indicated by names that as such do not signify a mode of relational being, but refer to something which coincidentally may be viewed as relational (1021b8-11).

The same division is found elsewhere. E.g. at *Top.* VI 4, 124a26-31, where the peculiar problems concerning the definition of relational being are discussed. Likewise at *Met.* I 6:

*Met.* I 6, 1056b32-1057a12: That which is one is opposed to what is numerically many as measure to measured thing; and these are opposed; and this so, in the way in which those modes of relational being are opposed which are not from their very nature relational.<sup>195</sup> We have distinguished elsewhere<sup>196</sup> the two senses in which relational things are so called: (1) as contraries, (2) in the manner in which knowledge is related to that which is known, viz. by something else

<sup>192</sup> For this rendering of the abstract noun ἰατρική ('medical art') compare my rendering 'someone's actually knowing' for ἐπιστήμη; my section 7.31 in Vol. II.

<sup>193</sup> Ross's rendering (followed by Kirwan) is incomprehensible: "[...] equality is a relative because the equal is, and likeness because the like is". For that matter, ἰσότης, not τὸ ἴσον, is instanced to implement the καθ' ὅσα group of 1021b6-7.

<sup>194</sup> For this 'connotative' or 'extensional' being see my section 1.64.

<sup>195</sup> E.g. one single man and a group of men (like an army) are opposed numerically, not from their nature ('manhood').

<sup>196</sup> *Cat.* ch. 7; *Met.* Δ 15.



being called relational with reference to it. [...] Plurality is so to speak the genus of number;<sup>197</sup> for number is plurality measured by one, and that which is one and that which is a plurality are in a sense mutually opposed, not as contraries, but in the way we have said some relational beings are; for in so far as one is the measure and the other what is measured, they are opposed. This is why not everything that is something one is a plurality, e.g. if it is something indivisible. But though knowledge is spoken of in a similar way [i.e. to the relational way mentioned before] with reference to what is known, the relationship is not expressed similarly; for while knowledge might seem to be the measure, and the thing known the thing measured, it happens to be that all knowledge is something being known, but not all that is to be known is knowledge, since in a way knowledge is measured by what is known.

The relational beings mentioned at 1021b3-4 are also found at *SE* 13, 173b1-3 ("relational beings that not only have relational genera, but are also themselves relational"), like those of the double-half type. At *Top.* IV 4, 124b35-125a2, specific being and its generic counterparts are discussed on account of their common way of being relational.

Kirwan is of the opinion (166f.) that 1021b3 conflicts with what is said in *Cat.* on genera and their species not sharing the status of being relational. However, he fails to see that at *Cat.* 8, 11a24-32 Aristotle is speaking of, say, grammatical knowledge, not taken universally as a species of the genus, knowledge, but as an individual case of knowledge, say, Socrates's actually knowing grammar, which is a mode of qualitative being of his, not something relational. At *Met.* Δ 15, 1021b3ff., on the other hand, the species, knowledge of the art of medicine, is put alongside its genus, knowledge, in perfect keeping with Aristotle's general idea of the genus-species classification and categorial ladders.

It may be concluded that the view of relational being found in *Met.* is chiefly the same as what is said about the subject matter in *Cat.* as well as in the *Top.* and *SE.*

Finally, some remarks may be added about Aristotle's view of relational being as directed against Platonic Forms. As was remarked before, to Aristotle it was of vital importance to satisfy the requirement of disclosing the real referents of relational names, without falling victim to any idea of Platonic transcendent Forms. The question is whether he succeeded.

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<sup>197</sup> Greek ἀριθμός is always used to stand for something which is more than 'one', 'one' itself not being a number, but the principle of counting ('principium numerandi'); my section 12.32 in Vol. II.

With regard to Plato's theory of Forms, even his first successors seem to have rejected the existence of transcendent referents as conveyed by relational names. In *Met.* A 9 Aristotle gives us a glance at the controversy. He speaks (990b15-17) of "more accurate arguments leading to Ideas of the πρὸς τι things", but we — notice that throughout A 9 Aristotle is speaking as a member of the Platonic circle — say that there is no independent class of them. Ross (I, 194) assumes on good grounds that Aristotle refers to certain implications actually stated in Plato's more accurate arguments, which were unwelcome to his successors. As a matter of fact, Plato's argument in *Phaedo*, 74A-77A and *Rep.* V, 479A-480A asseverates the existence of Forms of relational being; compare his rigorous view at *Rep.* X, 596A, to the effect that there is a Form answering to every group of things; this is alluded to by Aristotle at *Met.* A 4, 1070a18.

On Aristotle's more mature view, among all the things expressed by the categories, the πρὸς τι things are of the least substantial nature, as is read at *Met.* N 1, 1088a23ff., and so they even come after quantity and quality. This remark is followed by an interesting note on the ontological status of a thing's different ontic aspects:

*Met.* N 1, 1088a21-26: [...] what is relational is least of all things expressed by the categories <brought up as> a kind of subsistent entity, and is posterior to what is <brought up as> qualitative or quantitative being. And relational being is coincidental to what is quantitative, as was said, and not its matter, assuming that the matter [or hypokeimenon] coming to both relational being in general and its parts and species is some different thing.

To bring up something according to its being relational to some other thing is claimed to indicate it in a way that is least of all representative of its subsistent nature, second indeed to the names that call it up as qualitative or quantitative being. In fact, relational ontic aspects are coincidental — or sequels, so to speak — to quantity and quality, since things primarily being a *quale* or a *quantum* are, when related (compared) to others, 'similar' or 'like'. That is why the ontological statute of relational being entails that its hypokeimenon should always be something different. For instance, what possesses the relational mode of 'being a slave' is by itself a man, not a slave; and what is brought up as 'being a recumbent posture' (ἀνάκλισις) is in fact an animal body (taken together with this posture). All this is perfectly in keeping with the doctrine of the *Cat.* Ross is right, however, in observing (II, 473) that the coincidental character of

relational being as distinguished from the other modes of being indicated by the other non-substantial categories more properly belongs to metaphysics than to logic.<sup>198</sup>

It is plain that Aristotle's view of relational being is first and foremost aimed at exposing Plato's transcendent Forms as superfluous doubles of the things in the outside world. To his mind, the several names by which these things are designated according to their relational aspects, do not require any foundation in a transcendent domain. What they refer to is found within the world itself, since the *fundamenta relationis* are as many things or ontic aspects occurring here and now, and are, as such, simultaneous in nature with the modes of relational being.

That Aristotle is chiefly dealing with Platonic doctrine, in which even relationships are hypostatized,<sup>199</sup> pregnantly comes to the fore when he introduces a revised definition of relational being at 8a31-32, precisely in a context (8a13ff.) in which he seeks to evade the necessity of counting certain substances — namely, parts such as heads and hands, which might be considered in their relationship to bodies — as relational. The revised definition<sup>200</sup> indeed aims to identify relational being more precisely as that mode of being which as such entirely consists in being oriented to some other thing. Thus being a slave is purely relational, while being a head is a mode of being apart from its 'being of' or 'belonging to'.<sup>201</sup>

Quite understandably, the Ancient Commentators called the initial definition of 6a36ff. the Platonic one, which Aristotle was compelled to revise in order to evade unpleasant consequences.<sup>202</sup> Oehler (1984, 248) has rightly observed that Aristotle's primary objective is to prevent the secondary immanent ousiai from being misinterpreted as essentially referring to a corresponding transcendent Entity.

<sup>198</sup> At *EN* I 6, 1096a20-22, it is said that that which is by itself and subsistent (τὸ δὲ καθ' αὐτὸ καὶ ἡ οὐσία) is prior in nature to what is relational; for the latter is like an offshoot and something incidental to being.

<sup>199</sup> See e.g. the discussion of Sameness and Otherness in *Sophist*, 254Bff.; De Rijk (1986), 144-53.

<sup>200</sup> For the text see above.

<sup>201</sup> This distinction was later made in terms of 'secundum esse' and 'secundum dici'; see my note 203.

<sup>202</sup> Boethius, *In Categ.*, col. 217C7-9: "Huiusmodi autem definitio Platonis esse videtur; quae ab Aristotele paulo posterius emendatur".

4. 69 *Why should the first definition of πρὸς τι things be revised?*

In order to avoid the problem that some subsistent things which are someone's property, like an ox or a log, might seem relational beings, Aristotle must present a revised definition of relational being at 8a31ff., in which he is more explicit about the intimate connection between the specific nature of relational being and the something it is the 'being of'.

Ever since Ancient times there has been controversy about the interpretation of the criterion introduced by the revised definition of relational being. Sedley is right<sup>203</sup> that much darkness has been shed on this matter by the assumption — a commonplace indeed with the Ancient, Medieval and modern commentators — that the former definition focusses on the way things are *spoken of*, and the latter on how they actually *are*.

Before embarking on the revised definition it is pertinent to observe that (a) the revised definition is meant by Aristotle to rule out secondary substances, such as 'being a head or 'being a hand', which, like the corresponding primary substances, can be *spoken of* as 'related to', from being πρὸς τι things; (b) the argument pivots around the device of 'knowing definitely'; and (c) the problem may endanger Aristotle's firm rejection of transcendent Forms, since if definite knowledge does not bear on a particular of the outside world it must bear on some Platonic Entity. Thus Aristotle's main concern is to show that in the case of secondary substances problems may arise:<sup>204</sup>

*Cat.* 7, 8a13-28: It is a problem whether (as one would think) *no* substance is spoken of as relational, or whether this is possible with regard to some secondary substances. In the case of primary substances this *is* true, for neither wholes nor parts are spoken of as relational to anything: an individual man is not spoken of as 'some man *in relation to* something' (τινός τις ἄνθρωπος), nor an individual ox as 'some ox *in relation to* something'; likewise with parts: an individual hand is not spoken of as 'some hand *in relation to* someone' (but 'someone's hand'), and an individual head not as 'some head *in relation to* someone' (but 'someone's head'). The same goes for secon-

<sup>203</sup> Sedley (1997) 19, n. 12 refers to Simplicius CAG VIII, p. 198<sup>17</sup>ff.; Philoponus CAG XIII-1, p. 108<sup>31</sup>-109<sup>31</sup>; Olympiodorus CAG XII-1, p. 100<sup>4-20</sup>; Ackrill, 101; Oehler (1984), 248ff. I know of no exceptions among the Medieval commentators, who all speak of 'relativum secundum dici' and 'secundum esse'. Sedley's own terminology ('de dicto' vs. 'de re') does not clarify the issue either. Cajolle-Zaslowsky (1980, 185ff.) rightly rejects the idea that the first definition is linguistic, and the second ontological.

<sup>204</sup> Cajolle-Zaslowsky (1980), 188f.

dary substances, at any rate for most of them. For example, 'man' is not spoken of as 'man *in relation to* something' (τινός ἄνθρωπος), nor 'ox' as 'ox *in relation to* something', nor 'log' as 'log *in relation to* something' (but it *is* called 'someone's property'). In cases like these, then, it is obvious that they are not relational beings. But with some secondary substances there is room for dispute. For example, 'head' is always meant as 'someone's head', and 'hand' as 'someone's hand', and so on. Hence these things would appear relational beings.

What Aristotle means to say is that 'head' is, qua human (or animal) head *always related to* a human (or animal) being, and a head cannot be a head without being some [x]'s head, whereas this man, or man in general is not essentially related to something else to be (a) man at all. This leads Aristotle to question the first definition:

*Ibid.*, 8a28-b3: Now if the definition (ὁρισμός) of modes of relational being which was given above is adequate, it will be extremely difficult, if not impossible to reach the solution that no subsistent being is spoken of as relational. But if it is not adequate, and if, rather, *those* things are relational beings for which 'being' *boils down to* 'being somehow related to something else' (οἷς τὸ εἶναι ταῦτόν ἐστι τῷ πρὸς τί πως ἔχειν), then perhaps some answer <to the question> may be found.<sup>205</sup> The previous definition does, indeed, apply to all modes of relational being; but this one, <saying that the nature of relational beings consists in> being brought up precisely as what they are (αὐτὰ ἅπερ ἐστίν) *of* something else, *that* (τοῦτό γέ) is not what *their* being relational consists in. This makes it clear that if one knows some relational being definitely (ὁρισμένως) he will also know definitely that with reference to which it is spoken of as relational; this is even intrinsically plain. For if one knows of a certain 'this' that it is a relational being, and for those things that are relational *to be* boils down to being somehow related to something else, he also knows that to which it is somehow related. For if he does not know in the slightest that to which this is somehow related, he will not even know if it is relational at all.

Aristotle proceeds to illustrate his intentions by presenting some examples. Who definitely knows that something is double or more beautiful must also definitely know what it is double of, or that which it is more beautiful than (8b3-15). Sedley is quite right (*ad loc.*) that what he labels the 'principle of cognitive symmetry' is at the heart of the matter:<sup>206</sup> to definitely know a relational being entails your

<sup>205</sup> Denying, that is, that the oxes' and logs' being should precisely consist in their being related to something else, e.g. their owners.

<sup>206</sup> Mignucci too (1986, 113ff.) is quite right in underlining the cognitive context of what is said at 8a35ff., but his treatment of the issue is not conducive to the solution to the questions involved in every respect. Cf. his own remark (126): "Many problems remain".

knowing its correlational definitely as well, and the same goes for indefinite knowledge. Aristotle uses this principle to point out that substances like head and hand are not relational beings, since this principle does not apply to them:

*Ibid.*, 8b15-21: But as for a head or a hand or any such substance, it is possible to know it — what it itself is — definitely, without necessarily knowing definitely that in relation to which it is spoken of. For it is impossible to know *definitely* of what is just a head (αὐτὴ ἡ κεφαλὴ)<sup>207</sup> or a hand to whom it belongs. Hence these would not be relational beings. And if they are not relational it would be true to say that no substance is relational.

Aristotle winds up this discussion by remarking (8b21-24) that it is perhaps hard to make firm statements on such tricky questions without having examined them many times, but that still, to have gone through each of them is not unprofitable. Anyhow, his suggestion is plain: supposing you find a head or a hand, just so (αὐτῇ), you *eo ipso* will know that it belongs (belonged) to some particular whatever, without *definitely* knowing, however, it to belong to [x], and not to [y] etc. All that you know is that it belongs to some ‘headed’ or ‘handed’ entity. In such cases the aforesaid cognitive principle does not apply, since your *definite* knowledge of the secondary substance, ‘what it is to be a head’ corresponds to *indefinite* knowledge of ‘something headed’.

Sedley (1997, 20ff.) argues for Aristotle distinguishing ‘two degrees of relativity’, christened by him ‘soft relativity’ and ‘hard relativity’, the former being involved in the original definition, the latter in the revised one. The former definition is hospitable enough to include, alongside ‘hard’ relatives like ‘larger’ and ‘double’, also softies such as ‘state’, ‘disposition’, ‘perception’, ‘knowledge’, and ‘position’. However, Sedley’s view of the matter is not well-founded, I am afraid. For one thing, Sedley (1998, 17) has to concede that Aristotle wavers, sometimes consciously, between a hard and a soft conception of relativity, and that Aristotle occasionally seems to invoke the concept of hard relativity, but without treating it as integral to (and characteristic of) his *own* vocabulary. Furthermore, the revised definition is

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<sup>207</sup> No doubt, Sedley (1997, 17f.) is right in reading at 8b18 αὐτῇ instead of the usual demonstrative αὐτή. This makes any interference in the text (Ackrill, 23; see Sedley 15, n. 5) superfluous. Incidentally, Sedley (17, n. 9) is wrong in thinking that the fact that unlike τις and ὅδε, οὗτος is never used to indicate an individual generally also militates against the traditional reading; for it can be used by Aristotle to refer to the head or hand of someone in the class-room.

found in a contemporary work which is replete with echoes of the Academy, without any allusion to 'soft relativity':

*Top.* VI 4, 142a26-33: One must, however, observe that for some things it is obviously not possible to define them in any other way <than with reference to others>, for instance, the double without relating it to the half, and so for all things said to be relational in virtue of themselves. For to all such things their being boils down to being somehow related to something else, so that it is impossible to understand one without the other; and, accordingly, in the definiens of the one the other must be embraced.<sup>208</sup>

Sedley's assessment of the two definitions forces him to predate *the Topics*, since at *Top.* VI 8, knowledge is still brought up as satisfying the hard definition. Again, Sedley seems to misconceive the device of 'knowing indefinitely',<sup>209</sup> and thinks (1997, 23, n. 20) that Aristotle considers it an incoherent notion, and that it sometimes looks as if Aristotle wants to outlaw the concept of indefinite knowledge altogether. He suspects that Aristotle has no well-thought-out answer to questions such as 'Is it possible to know that a head belongs to the headed?'<sup>210</sup>

The relationship between the two definitions is far less complex, it would seem. The revised definition (8a31-32) is more to the point than the initial one (6a36-37) in that it more sharply singles out the special aspect involved in a thing's being relational, i.e. that aspect precisely which completely coincides with what it is to be relational.<sup>211</sup> Thus the slave Callias is far more than just a slave: he is a human being, to begin with; therefore he is not just 'of something else' (as might be gathered from the initial definition). The revised definition means to rule out any misunderstanding, including the far-fetched ones, by more sharply bringing the relational aspect of a thing's

<sup>208</sup> Cf. *Top.* VI 8, 146a36-b4 and *Cat.* 6, 5b31-32; 7, 8a35-37 and b2-3. At *SE* 31, 181b26-27, there is a warning against conceding that names (κατηγορίας) of what is brought up as relational being have any meaning, when taken by themselves.

<sup>209</sup> In fact, this notion has much to do with the Medieval 'suppositio particularis indeterminata', and also with modern 'referential opacity' and 'intentional identity'; Geach (1972), 146-53.

<sup>210</sup> Sedley (1997, 22-5) distinguishes between 'soft' and 'hard relativity' in Aristotle. This idea was suggested to him, he says, by Simplicius, who seems to describe (*CAG* VIII, p. 166<sup>15-29</sup>) this distinction to the Stoics (Sedley 1998, 11-23). His arguments are rather hesitant, and not to the point, I am afraid.

<sup>211</sup> Caujolle-Zaslavsky (1980, 191) suggests that the second definition is of no use, since if you apply the first one correctly there will be no problem at all. She even goes so far as to ascribe the second definition to some less gifted author. Her arguments are far from convincing.

being into focus: to speak of something as relational implies to focus on it in that capacity precisely by which it is relational to something else, leaving any other of its modes of being out of consideration, even its essential one.<sup>212</sup> Thus its purport comes very close to Aristotle's later consideration of the qua-locution (our section 2.76).

#### 4. 7 *Qualitative being*

In chapter 8, the qualitative mode of being<sup>213</sup> is likewise unmistakably defined from the semantic point of view:

*Cat.* 8, 8b25-26: I take qualitative being as that mode of being in virtue of which people are brought up as qualified somehow; as for that, quality is among the things spoken of in a number of ways.

##### 4. 71 *Four kinds of qualitative being*

When the author says that ποιότης is 'spoken of in a number of ways', he does not take the term as an ambiguous word but only means to say that there are different kinds of qualitative being. However, his manner of speaking has everything to do with the semantic approach, since what is in the forefront of his mind is the different ways in which things can be brought up in virtue of their having certain qualities. So the examples he gives of the different kinds of qualitative being are *people* who are brought up as being in a certain condition ('being called a *quale*'): 8b37ff.; 9a11-13; 9a14ff.; 9a32ff.; 9b23ff.; 9b35ff.; 10a13ff.; 10a27ff.; 10b14ff.; 10b26ff.; 11a15ff; 11a20ff.<sup>214</sup>

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<sup>212</sup> *Cat.* 7, 7a22-b3: everything that in the slave is coincidental (συμβεβηκός) to his being a slave (e.g. his being a man) should be stripped off. Calling this "Aristotle's singular way of putting this", Sedley seems to misconceive the merely logical 'coincidence' issue. De Rijk (1982), 31, n. 31; 62. Caujolle-Zaslowsky (1980) fails to see this (esp. 191-5). By confounding naming and predicating, and semantics and syntax, she is forced ('by way of tentative hypothesis') to regard 'relatives' as 'une sorte de prédicat au second degré' (195) and a kind of 'commentaire sur les prédicats' (*ibid.*). See also my section 13.2 in Vol. II.

<sup>213</sup> Aristotle has ποιότης ('quality'); the word is probably coined by Plato, *Theaet.* 182A (Ackrill, 103). For my taking it as 'qualitative being' or 'somebody's being a certain quale' see my section 7.31 in Vol. II.

<sup>214</sup> The particular cases of 'knowledge' spoken of in 11a20-36 should be taken as 'someone's actually knowing something'; see previous note. For this use in general see the semantic rule, RMA; my section 1.71.



The different ways are then enumerated. The author (8b26-27) proposes to consider 'having' (ἔξις) and 'being disposed' (διάθεσις) as a kind of qualitative being. These two are contradistinguished (8b27-9a13) on the criterion of permanence and being part of a person's nature (πεφυσιωμένη, 9a2), the former being different from the latter in that it is more stable and lasts longer. 'Having' (or 'state of being') is instanced by having instances of knowledge or virtues, which are thought to be some lasting mode of being, and hard to change, unless a change is brought about by illness or something like that. Examples of quickly changing dispositions are heat, chill, health and sickness and the like. As a matter of fact, this distinction is mirrored in ordinary language, Aristotle says; for by ἔξις people do understand what is more lasting and harder to change. Thus those who lack full mastery of instances of knowledge and are easily swayed by something are not said to be in a state, though they are, of course, in some way disposed in virtue of their knowing something.<sup>215</sup>

Another kind of qualitative being is presented (9a14-27) as the one that is assigned in virtue of a natural capacity or inability. So people are called boxers or runners because they have a natural capacity to do something with ease; similarly, they are called healthy because they have a natural capacity not to be affected too easily by what befalls them.

A third kind is given (9a28-10a10) some more attention. It concerns affective qualities (παθητικά καὶ ποιότητες) and affections (πάθη), such as sweetness, bitterness, sourness, and so on, and also heat and cold, as well as having a pale or dark complexion. Again, they are viewed in their capacity of being name-givers:

*Ibid.* 8, 9a31-35: That these are modes of qualitative being is plain; for what possesses them is brought up as qualitative in virtue of having these qualities. Thus honey is called sweet; and a body pale because of the fact that it has received paleness, and so with the others.

Subsequently, the different footings on which the assignment of qualitative names may rest are dealt with (9a35-b19). For instance, in the case of something being hot or cold, we speak of affective qualities because they are productive of an affection of the senses, while being pale or being dark are affective qualities because they themselves have been brought about by an affection. Further, on the

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<sup>215</sup> In point of fact, knowledge is taken by Aristotle to be a disposition of the soul. Rémi Bragues (1980) broadly elaborates the permanence criterion.

permanence criterion, we distinguish between lasting qualities and momentary affections (9b19-33), including affections and qualities of the soul (9b33-10a10).

A fourth kind of quality concerns a thing's shape and external form, such as being triangular or being curved (10a11-16). Remarkably, designations such as 'being open-textured' and 'being close-textured', and 'being rough' and 'being smooth' are not admitted to the list by Aristotle, because, he says, "they seem to be foreign to the classification of modes of qualitative being" (10a18-19). He rather counts them as referring to the order or position of something's parts; for a thing is close-textured because its parts are close together, or open-textured because they are separated from one another, and smooth because its parts lie somehow on a straight line, rough because some stick up above others (10a19-24).

On the face of it, however, such designations could easily be counted as modes of qualitative being of the fourth kind.<sup>216</sup> This much seems to be certain (*pace* Ackrill, 107) that Aristotle rather associates them with θέσις ('posture' or 'positional mode of being'). The reason for doing so might be that the properties under examination entirely depend on the mode of being of a thing's parts, and θέσις is associated with the different positions adopted by an animal's bodily 'parts', viz. its mobile limbs.<sup>217</sup> Anyway, Aristotle's concluding remark at 10a25-26 ("Perhaps some other manner of qualitative being might come to light, but we have made a pretty complete list of those most in use"; cf. 10b11) suggests that the classification (Aristotle has 'division') is not too strictly defined. For that matter, in the next paragraph, the author comes to speak of things brought up in virtue of these (aforesaid) ways "or qualified in some other way" (10a28). Besides, one should be aware that ultimately the general idea brought forward in *Cat.* is that one and the same thing can be brought up for discussion in ten different ways, depending on what the focus of interest is upon; it is not about the ins and outs of actual assignments of names. Indeed, in Aristotle's opinion it does not matter at all if one and the same thing can be designated by several names.

<sup>216</sup> Ackrill, 107; Oehler (1984), 262.

<sup>217</sup> Gillespie (1925), 12. There is something in Gillespie's general observations that the actual Aristotelian substances are pre-eminently biological objects, living things. Cf. Furth (1987), 23; 27. Similarly Devereux (1992, 64) aptly observes that in *Cat.*, chs. 1-5, the examples of primary substances always concern instances of natural kinds, in fact instances of species of live organisms like men, horses, trees.

4. 72 *On paronymy*

A matter of far greater importance is the paronymous use of qualitative names, dealt with in the next few lines (10a27-b11). After enumerating the diverse kinds of qualitative being expressed by qualitative names, Aristotle embarks on the general issue of how things can be brought up according to their qualitative aspects. Properly speaking, the issue is semantic: at first glance it seems only a matter of grammar, but it definitely includes some deep structure aspects bearing on our understanding of reality.

To begin with, let us recall the two earlier occasions Aristotle spoke of paronymy. In the opening chapter of *Cat.* paronymy is described (1a12-15) in terms of naming, such that things which are called up paronymously are those that possess the universal nature signified by the name as it is enmattered in the subsistent entity they primarily refer to. For instance, "the grammarian gets his name from grammatical knowledge and the brave theirs from bravery" (1a14-15). The derivativeness in question is not etymological; rather 'being brave' means 'being affected or informed by the property or form, bravery'. The property in question, by definition, is an enmattered form, not, of course — not even to Plato<sup>218</sup> — some transcendent nature.

In the chapter on ousia it was claimed that it is a characteristic of ousiai and differentiae that all things called after them are so called synonymously (3a33ff.). This means that the 'account of being' (λόγος τῆς οὐσίας) expressed by the name of the ousia or differentia applies equally to each one of these things. So ox and man are synonymous things *in so far as* the account of being which is expressed by e.g. 'animal' (or 'living body', and so on for all the superior genera) both applies to whatever is called an ox and whatever is called a man (1a8-12). Thus at 3a33aff. it is said that, if things are designated by one and the same name of an ousia or differentia (e.g. 'man' or 'sensitive'), they are synonymous *in so far as* they share the name 'man' or 'sensitive'. For example, if the things [x] and [y] are both called up by the designation 'this man' or \*'this sensitive <thing>' they are synonymous.

From the definition of paronymy, on the other hand, it is plain that paronymy is commonly involved when names from non-

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<sup>218</sup> For the immanent status of forms in Plato see De Rijk (1986), 55-63, and *passim*.

substantial categories are assigned to subsistent things. If we assign to Socrates the designation 'being brave' or 'bravery' we are calling him up not as 'this bravery', but \*'this brave', using a word with a different ending from the name signifying the account of being (ἀνδρεία, 'bravery'), which refers to ('denotes') some subsistent thing possessing this feature (ὁ ἀνδρεῖος, 'the brave man') and merely 'connotes' this feature.

Ackrill has well observed (72f.) that the whole idea of an  $[x]$ 's being called 'F' *from something else* (whether synonymously or paronymously) is of importance in *Cat.* From the viewpoint of semantics and metaphysics, this means that the 'thing', F, *from which*  $[x]$  and  $[y]$  etc. 'borrow', so to speak, the right of bearing its name requires careful examination. To Plato, the matter is simple: any naming is accomplished 'from beside', meaning that concrete things like  $[x]$  and  $[y]$  are entitled to bear a name 'F' merely because they partake in transcendent 'F-ness', which is itself the only titular that bears the name 'F' in its own right.<sup>219</sup> To Aristotle, however, the 'from something' (ἀπό τινος) question is by far more complex. In the case of synonymous things, the *from something* is the very nature of the entity  $[x]$  or  $[y]$  in virtue of which it is most properly entitled to the substantial name ('man', 'horse', or 'animal', 'living thing', and so on). So there is no need whatsoever to take refuge in something that transcends the outside world.

But what should we think of the paronymous things and their 'something from beside'? When it comes to paronymy, things seem to be substantially different, and could even jeopardize the very kernel of Aristotle's ontology. As we have seen before (my section 4.21), in paronymous cases it is no longer things *denoted* as inhabitants of our outside world that are in order, rather it is things *connoted* by the adjectival term that come into the picture, e.g. bravery, when we call someone \*'the brave', despite the fact that it is primarily subsistent entity that is denoted. This might suggest that the 'something beside' (παρά), which is itself primarily entitled to its name and lends it to the thing denoted — we have to realize that for Aristotle too, this 'something beside' is a form (εἶδος) — should be 'something yonder', beyond the outside world, that is, and, consequently, should be some sort of entity dwelling in Plato's transcendent domain of Forms. Hence Aristotle has to make every effort to ensure that as an

<sup>219</sup> Cf. Plato, *Phaedo* 102B1-2; 107B8-9. De Rijk (1986), 55-7; 60-3; 248-53; 316-26.

immanent form, this 'from beside', too, is found *within* the transient world.

Coming now to 10a27ff. we see how Aristotle assesses the 'something beside', from which things are called paronymously. In most cases, indeed in practically all, he says (10a29-32), things are brought up paronymously in the way in which<sup>220</sup> the pale man is called from paleness, the grammarian from grammar, the just from justice, and so on. In some cases, however, this procedure is impossible, because no names are available to indicate the 'something beside'. For example, the runner or the boxer, so called in virtue of a natural capacity, are not called paronymously from these capacities, nameless as they are. So far, the problem can be seen as a purely grammatical one. Sometimes, however, the grammatical deficiency seems to hide a deeper problem:

*Cat.* 8, 10b5-9: Sometimes, however, even when there is a name for a mode of qualitative being, that which is brought up in virtue of it is not so called paronymously. For example, the good man is so called from his virtue, since it is because he has virtue that he is called 'good', but he is not so called paronymously from 'virtue'.<sup>221</sup> This sort of case is, however, rare.

In light of Plato's doctrine of virtues, the unity of virtue in particular, the last-mentioned cases are less harmless, I think, than they may seem at first glance. Given the general idea of the parallelism between thought, language and reality,<sup>222</sup> and the central position of the notion of 'goodness', this grammatical shortcoming may appear to have some philosophical weight to people of Platonic circles, to whom, when writing *Cat.* Aristotle was still rather close. This line of thought should be given the more attention as, from the viewpoint of Platonism, the labels 'synonymous', 'homonymous', and 'paronymous' are co-ordinate; for, unlike to Aristotle, to Plato all three of them are used comparatistically. To Plato, the relationship between particulars and the transcendent Form they are named from, is indeed one of paronymy in so far as the latter is the primary titular of the name.<sup>223</sup> Thus the classification of things as homonymous,

<sup>220</sup> The word *ὅθεν* does not here merely introduce examples, but indicates the way in which in most cases paronymy occurs.

<sup>221</sup> Note that in English he may be called paronymously 'virtuous'.

<sup>222</sup> My section 1.2.

<sup>223</sup> In fact, this paronymy is a one-sided relationship between the transcendent Form, F (Man(hood), Paleness), and its instantiation, f (manhood, paleness), and the instances, [x] and [y] of the outside world partaking of F.

synonymous, and paronymous things in the manner in which they are presented in the opening chapter of the treatise is at least reminiscent of Platonic thought.

#### 4. 73 *Some characteristics of qualitative being*

In the next few paragraphs (10b12-11a19), some characteristics of qualitative being are dealt with. First, contrariety (10b12-25). There is contrariety, not only between the modes of qualitative being themselves ('instantiations'), such as paleness and blackness, but also between the things they inhere in ('instances'). However, contrariety does not befall to all qualities, e.g. not to colours. Further, if one member of a pair of contraries is a mode of qualitative being, the other is so, too. Take, for example, 'being just': if this is a qualitative mode so is 'being unjust'; for none of the other categorial names (κατηγοριῶν) fits being unjust (10b12-25).

Qualitative being admits of a more and a less in two respects. First, one thing is called more pale or just, or less pale or just, than another. Moreover, qualitative being itself sustains increase (for what is pale can become more pale), not in all cases though, but in most (10b26-30). An interesting question then arises (10b30-11a5) — interesting, that is, in the context of Platonism.<sup>224</sup> Some people utterly deny that one instantiation of justice or health is called more or less justice or health than another, though they agree that one person ('instance') may have less justice or health than another. The question then is whether the undeniable differences between more just and less just persons are to be ascribed to nuances existing in the instantiations themselves or to different conditions of the persons ('instances') as such. To put it differently, can instantiations admit the unshakable definition of Justice or Health in dissimilar ways? Aristotle confines himself to firmly stating that at any rate *things* spoken of in virtue of these properties unquestionably admit of a more or a less: one man is called more grammatical, more just, or healthier than another.

One other thing is likewise undoubtedly true: shapes, such as being triangular or quadrangular, do not admit of a more. For things<sup>225</sup> that admit the definition of triangle or circle are all equally triangles or circles, while none of the things which do not admit it will be

<sup>224</sup> Ackrill, 107f.; Oehler (1984), 263.

<sup>225</sup> Physical things, such as architectonic figures are meant, not abstract figures.

called less triangle or circle than another; neither a square nor an oblong is a circle, and they both fail to be so in equal ways (11a5-14).

Just as none of the aforesaid properties generally belong to qualitative being, so none of them seems to be really distinctive of it. There is one that is, however: it is exclusively in virtue of qualitative being that things are called 'similar' or 'dissimilar' (11a15-19).

The concluding part of the chapter (11a20-38) deals with the intriguing question how in discussing qualitative being, modes of relational being were often addressed. Aristotle points out that there is nothing absurd in one and the same thing being brought up in different categorial ways (11a37-38).

#### 4.8 *The remaining six modes of categorial being. The Postpraedicamenta*

The second part of *Cat.* (chs. 4-9) fades out in chapter 9, and the passage 11b10-16, which serves as a transition to the third part (chs. 10-15), is certainly not genuine Aristotle.<sup>226</sup>

The authentic part of chapter 9 states (11b1-8) that the categorial modes of 'being active' and 'being affected' admit of contrariety and of a more or a less. In the transitional passage, it is claimed that being in a lying position (κείμεθα) is spoken of paronymously from position or posture (θέσις).<sup>227</sup> The remaining three categories ('When', 'Where', and 'Having') are so obvious, the author says, that they do not require further exposition.

It need not come as a surprise that the remaining categories are not given extensive attention in *Cat.*, since it is categorization as a semantic procedure that is at the focus of Aristotle's attention, and the ins and outs of this procedure could be sufficiently disclosed by dealing with the four main categories discussed in chs. 5-8. None the less, in the final chapter of *Cat.* the author will have more to say about the curious mode of categorial being expressed by the word 'having' (ἔχειν).

The concise treatment of the six additional categories (ch. 9, 11b1-16) is followed by a discussion of a number of items which were later called the 'postpraedicamenta'. They can best be taken to concern logical relationships existing between things said according to certain

<sup>226</sup> Ackrill, 69.

<sup>227</sup> There is a reference to ch. 7, 6b12-14.

modes of being. The relationships he examines are the different kinds of mutual opposition between things, the arrangement of things after their being prior and posterior, or being simultaneous (chs. 10-13). The subsequent chapter discusses the phenomenon of change occurring in four modes of categorial being (ch. 14). Finally, there is the short chapter (15) in which the different ways of 'having' are briefly enumerated and exemplified.

#### 4. 81 *The fourfold classification of opposites*

It is in virtue of the procedure of categorization that the things we bring up for discussion in various ways come to acquire specific relationships to one another. One of these relationships is opposition. Things opposed are always somehow related to one another, but the nature of their opposition is not always the same. In some cases the opposition between things bears on their merely being put together under a certain relational respect ('father-child', 'double-half'). Other cases can be classified as instances of formal contrariety or formal contradiction, or the formal opposition existing between the state of natural possession and unnatural deprivation. Thus Aristotle arrives at a fourfold classification of opposites:

*Cat.* 10, 11b17-23: Things are said to be opposed to one another in four ways: as relational or as contraries or as privation and possession or as affirmation and negation are. Examples of things thus opposed (to give a rough idea) are: of those opposed as relational modes of being, the double and the half; as contrary modes, the good and the bad ones; as privative and non-privative modes of being, blindness and sight; as affirmation and negation, 'being seated — not being seated'.

These modes of opposition are often used by Aristotle to find arguments, both epistemonical and dialectical ones.<sup>228</sup> In the next lines Aristotle goes on to elaborate what he has announced.

#### 4. 82 *On things opposed in virtue of a relational mode of being*

The things mutually opposed as relational beings are briefly discussed (11b24-31) in keeping with what was said in chapter 7, 6b28-7b14. Although it cannot be denied that this paragraph *expressis verbis*

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<sup>228</sup> E.g. *Top.* II 8; V, 6; *Met.* I 3, 1054a23ff, 4, 1055a38ff., 1057a33ff. In *Top.* VI 8, the list of relational modes is employed.



uses the first, Platonian criterion to identify relational being, not the revised one of 8a31-32, the examples given also satisfy the latter criterion. Hence it cannot be inferred that this paragraph was written before the revised criterion was worked out.<sup>229</sup>

The subsequent paragraphs deal with the other oppositions, each of them in contradistinction to relational opposition. Contrariety is not relational in the specific sense under discussion, although things may be called each other's contrary (11b32-33); privation and possession are applied concerning one and the same thing (12a26), and affirmation and negation are opposed in a unique way, viz. in terms of the apportionment of truth and falsehood (13a37-b3).

#### 4. 83 *On things contrarily opposed*

After contrary opposition has been marked off from the opposition between relational being and its correlate (11b33-38), a distinction is made between the type of contrary opposition that lacks an intermediate and the type that has one (11b38-12a25). If one or the other of the contraries necessarily belongs to something they naturally inhere in, or are said of, there is nothing intermediate between them. Examples are sickness and health with respect to an animal's body, and odd and even with respect to number. But if there is no question of such a natural alternating inherence, there is something intermediate between the contraries: e.g. between white and black are grey, yellow and all other colours, and between good and bad, the 'neither bad nor good'. From these examples it appears that sometimes names are available to designate the intermediates, while at other times we have to use a disjunction of the two members negated, 'neither ... nor'.<sup>230</sup>

Chapter 11 has more to say about contrary modes of being. By induction from particular cases (τῇ καθ' ἕκαστον ἐπαγωγῇ) it can be inferred, Aristotle claims (13b36ff.), that what is contrary to a good thing is necessarily something bad. In this manner sickness is opposed to health, injustice to justice, cowardice to courage, and so on.<sup>231</sup> But the inference does not go the other way round. So that

<sup>229</sup> So rightly Ackrill, 109.

<sup>230</sup> The different senses of 'contrary' are found in the Lexicon, *Met.* Δ 10, 1018a25-37.

<sup>231</sup> It should be borne in mind that in Aristotle's ontology, the substantive nouns 'health' and 'sickness' etc. include connotative being and so are to be taken to stand for particular states of [x]'s or [y]'s 'being healthy', 'being sick' and so on.

which is contrary to something bad is sometimes good but sometimes bad. For excess being contrary to deficiency, which is something bad, is itself also bad; yet moderation is also contrary to both, and is itself something good. In most cases, however, what is contrary to a bad thing is itself something good.

All contrary modes of being naturally concern things that are generically or specifically the same, so sickness and health find their natural substrates in an animal's body, and whiteness and blackness in a corporeal thing simply, and justice and injustice in a soul (14a15-19). Besides, Aristotle says (14a19-25), it is useful to know that all contraries must either be in the same genus or in contrary genera, or else be genera themselves. For being white and being black are modes of being found in the same genus, viz. colour ('being coloured'), but being just and being unjust are in contrary generic modes of being, since the genus of one is being virtuous, of the other being vicious; being good and being bad, you might say, are not in a genus, but are themselves generic modes of certain specific modes.

The last sentence calls for some comment. Does Aristotle mean, Ackrill (111) asks, that being good and being bad are not in any *ordinary* genus but fall immediately under a category, or that that they are not in any one category, because 'good' like 'being' occurs in all the categories (cf. *EN* I, 6)? He thinks that if the latter is Aristotle's point he does not express it very well by saying that they "are themselves genera". I think we have to emphasize the use of the verb *τυγχάνει* at 14a24, meaning that because of the equivocal use of 'being good' in all the categories,<sup>232</sup> being good and its contrary counterpart, being bad turn out to act as *a sort of* genera of their own, crossing, as it were, through the whole scheme of categorial being.

Clearly, the observations we find in chapter 11 can be of help to correctly frame arguments, both for dialectical and doctrinal purposes. In *Met.* Δ 10, the *Lexicon*, the multifarious forms of contrariety are discussed along similar lines as in *Cat.*, chs. 10-11. In *Met.* I, chs 4-5, 1054b32ff., the broader discussion of contrariety as "a kind of difference", in fact, "the greatest difference", is built upon the basic views expounded in *Cat.* In *NE* II 8, the several modes of being

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To Aristotle, there is no health other than health enmattered in some particular.

<sup>232</sup> *Top.* I 15, 107a3-17; *EN* I 6, 1096a18-29. In the latter discussion, there is already a hint to the later view of 'good' as a transcendent term, together with 'being' and 'one', and, later on, 'true' and 'thing' ('res'). See also Oehler (1982), 276f.

virtuous or vicious are discussed along the lines of their being contrarily opposed.

#### 4. 84 *On things privatively opposed*

There is privative opposition between each one of the things that are spoken of in connection with one and the same thing the non-privation ('having', ἔχεις) naturally comes to. Thus we say that anything susceptible of 'having' *F* is 'deprived of' it whenever the possession of *F*, though being natural, is entirely absent from it. For example, what we call 'toothless' or 'blind' are not things that do not have teeth or sight, but things that do not have them at the time when it is natural to have them (12a26-34).

Next an interesting semantic observation is made (12a35-b16), which is aimed at distinguishing between instance ('thing possessing or being deprived of') and instantiation ('possession' or privation'). For example, sight is a mode of 'having' and blindness is a privation, but having sight is not the same as sight nor is being blind the same as blindness.<sup>233</sup> The distinction is explained in terms of the different semantic behaviour of the terms involved. Blindness is a privation, but 'being blind' means actually being in a state of deprivation,<sup>234</sup> not just privation apart from its being enmattered. For that matter,<sup>235</sup> if blindness were the same as being blind both would be said of the same thing. But this is not the case: for though a man (an instance of blindness, that is) is called 'blind', he is certainly not called 'blindness'. None the less, the instances too seem to be opposed as contraries, in the same way as privation and possession. For just as blindness is contrarily opposed to sight, so being blind (or the blind person) is opposed to having sight.

Ackrill (110) thinks that the argument is not carefully stated, since there seems to be a switch from 'being blind' to 'blind'. But to

<sup>233</sup> Note that properly speaking, the infinitives ἐστερηθῆναι and ἔχειν refer to the state of being deprived and being in the possession of, and, consequently, the substrate itself qua being in such a state. See the semantic Main Rules; my section 1.71.

<sup>234</sup> Notice the perfect tense ἐστερηθῆναι at 12a39.

<sup>235</sup> Reading ἐπεὶ (with the codex Ambrosianus, and the exemplars of the Boethian and of one of the Syrian translations) instead of ἔτι ('Moreover' introducing another argument). — As to this special use of ἐπεὶ, the word is sometimes used elliptically to introduce an incidental remark ('by the way', 'after all'; Dutch 'trouwens'; German 'übrigens', 'sowieso'; French 'd'ailleurs', 'de toute façon'). The rendering 'because' will not do in such cases. Other uses in Aristotle are e.g. *Met.* Z 7, 1033a19; 15, 1040b2; *EN* IV 1, 1121a19; my *Index* s.v.

Aristotle, there is no such switch, because in Aristotelian as well as Platonic semantics, every noun, whether substantival or adjectival, connotes the notion 'being'.<sup>236</sup>

The question arises why it matters so much to the author to make such a clear distinction between instantiations (like the property, blindness) and instances possessing it. In fact, in Aristotelian metaphysics it is of so little use to contradistinguish an enmattered *eidos* with that *eidos* as taken apart from matter that in *Met. Z* the telescoping of substantial instantiation and instance (substance) will be the very basis of the metaphysical argument against Plato. I agree that to contradistinguish instance and instantiation too eagerly could betray a Platonic approach to the matter. Undoubtedly, the semantic distinction made by the author has some sort of ontological basis. But considering Aristotle's antagonism toward Plato, I think for Aristotle it serves a different purpose, viz. as a tool to frame disputational arguments. That this is what the author has in mind also appears from the frequent use he makes of the 'privation-possession' topic for dialectical as well as doctrinal purposes.<sup>237</sup>

In the next paragraphs (12b16-13a36), several arguments are brought forward to underline the differences between the privative opposition on the one hand, and both the relational and the contrary ones on the other.

A final remark should be made about Aristotle's view of privative being. In the *Lexicon*, *Met. Δ* 22 — quite understandably in this context, for that matter — we come across the different uses of the notion of privation (στέρησις). (1) In one sense, the word 'privation' is used to indicate merely a lack of something, like when a plant is said to have no eyes; (2) in another, if a thing does not possess what characteristically belongs to it or its genus, as, for instance, a blind man and a mole lack sight in different ways, one in respect of its genus, the other in its own right; (3) in still another sense the word is used if a thing does not possess something characteristic even at a time when it is characteristic to possess it, e. g. blindness at an age at which the possession of sight is natural. Finally the compulsory removal of anything whatsoever previously possessed is called 'being

<sup>236</sup> Ackrill has himself, it should be recalled, pointed out this semantic feature in his comments on chapter 6. By the way, the decisive difference between Plato and Aristotle on this account is that to Plato, εἶναι is not an empty container but just the opposite, to wit, the 'plenitudo formarum'.

<sup>237</sup> E.g. *Top.* I 15, 106b21-28, II 8, 114a7-12; *Met.* Θ 1, 1046a31-35; I 4, 1055a33-b29.

deprived of'.<sup>238</sup> It is easy to see that the third use comes closest to the technical use found in *Cat.*

In *Phys.* I, chs. 7-9 and *Met.* A, 4-5, privation is dealt with in the context of Aristotle's doctrine of the first principles of being. For instance at *Met.* Θ1, 1046a31-35 and I 4, 1055a33-b29, it is discussed in terms of the two other opposites, contrariety ("all contrariety must be privation, but presumably not the other way round"; 1055b13-15)<sup>239</sup> and contradiction ("privation is a contradiction or incapacity which is determinate or taken along with the receptive material"; 1055b7-8).

Oehler right observes (1984, 270) that in Aristotle the permanent state of being deprived of a form (e.g. blindness as a privation of sight) tends to act as a form of its own, so that it becomes very much like a kind of qualitative being. This led Alexander of Aphrodisias to identify privation as a ποιότης.<sup>240</sup> All this is, of course, quite alien to Plato, to whom the idea of privative Forms is totally absurd.<sup>241</sup>

#### 4. 85 *On things opposed as assertion and denial*

The final opposition to come up for discussion is the one between affirmation and negation (13a37-b35). This mode is clearly marked off from the other ones because of the distribution of truth and falsehood among its members, or in Aristotle's words: "with them it is necessary always for one to be true and the other false" (13b2-3). This is indeed not the case with the other opposites; for with contraries it is not necessary always for one to be true and the other false, nor with relational beings or with possession and privation. E.g. being healthy and being sick are contrary modes of being, and neither is necessarily either true or false; similarly, being double and being half are opposed as modes of relational being; and, again, neither of them is necessarily either true or false. The same applies to cases of possession or privation, such as having sight and being blind (13b3-10).

Next, the criterion of *Cat.* ch. 2, 1a16-19 to determine whether things are said with or without combination is taken into consideration. "Nothing, in fact, that is said without any combination is either true or false; and all the above kinds of opposites *are* said without

<sup>238</sup> At 1022b36ff., some more uses are mentioned.

<sup>239</sup> Cfr. *Cat.* 10, 12b26-13a36, where the assessment of privation among the scheme of opposites is broadly discussed.

<sup>240</sup> *Apud* Simplicium CAG IX, p. 211<sup>21</sup>.

<sup>241</sup> De Rijk (1986), 173-80.

combination" (13b10-12); so the things opposed as affirmation and negation are a special group of opposites. In thus marking off the present kind of opposition from the three others, the notion of *συμπλοκή* is decisive.

As we saw before (my section 2.31), in the case of contraries and privatives the *συμπλοκή* concerns the combination of the same affirmative assertoric operator with mutually opposed assertibles, whereas in the case of things opposed as affirmation and negation it is the assertibles that are the same, whereas the operators are different. Take, for instance, 'be<sup>242</sup> double' – 'be half', 'be good' – 'be bad', and 'be blind' – 'have sight', as compared to e.g. 'be seated' – 'not: be seated'. Hence it is clear that the *συμπλοκή* item should bear on assertibles applied in actual assertion, as a result of which the 'affirmative-negative' opposites both acquire truth or falsehood, a condition that is missing in the other three (13a37-b12).

To fully understand what Aristotle is saying in this paragraph, we should reconsider one of his earlier observations at 12b5-16. After he has underlined the difference between e.g. blindness, when understood as a privation taken apart from its being enmattered in something on the one hand, and someone's actual state of being deprived of sight on the other, the author goes on to make a similar distinction with regard to the things opposed as affirmation and negation:

*Cal.* 10, 12b5-10: Nor is what underlies an affirmation or negation itself an affirmation or negation. For an affirmation is an affirmative statement (λόγος καταφατικός) and a negation a negative statement (λόγος ἀποφατικός), whereas none of the things underlying an affirmation or negation is a statement, <but a state of affairs>.<sup>243</sup>

Thus the linguistic act of affirming and denying something, including its apophantic content is carefully distinguished from the semantic content, viz. the state of affairs (πρᾶγμα) which is involved in it. The fact that this distinction should come up now is the more conspicuous — as is the previous one, for that matter — considering that, like before, the author cannot wait to declare that nevertheless

<sup>242</sup> In all such phrases 'be' is used indiscriminately to stand for 'being' or 'to be', to make up an incomplete assertible or incomplete 'that-clause', e.g. 'being-double', which can be used to form a complete assertible, such as "that-[x]-is-double".

<sup>243</sup> ἀλλὰ πρᾶγμα, taking the addition (or interpolation?) found in the codex Ambrosianus, and in one of the Syrian translations seriously. That these words are quite to the point appears from the context, most explicitly at 12b15.

the states of affairs are opposed (viz. as affirmation and negation) in the same way as the acts are:

*Ibid.* 10, 12b10-16: These too are, however, said to be opposed to one another in the same way as affirmation and negation are, for in these cases too, the manner of opposition is the same. For as at times an affirmation is put in opposition to its denial — for example '[...] is seated' in opposition to (πρός)<sup>244</sup> '[...] is not seated', just so opposed are also the state of affairs (πράγμα) underlying each of them, viz. that someone<sup>245</sup> is seated in opposition to his not being seated.

The συμπλοκή concerning the affirmation vs. negation opposition, however, turns out (13b10-12) to bear upon the act of statement-making, which as such is not included in the other kinds of opposition.<sup>246</sup> This means that the opposition 'being double' vs. 'being half', or 'being blind' vs. 'having sight', do not *eo ipso* imply the assertion and the simultaneous denial of these assertibles. In other words, being blind, having sight etc. are states — just as Socrates's-being-blind or Socrates's-having-sight are states of affairs — to be expressed by *unapplied* (incomplete or complete) assertibles. That is why no truth or falsehood is involved in these assertibles.

You may ask now *why* the affirmation vs. negation opposition includes truth or falsehood, while the others do not. As we saw, the former opposition, by definition, is about statement-making (*Cat.* 10, 12b6-8; cf. 4, 2a7-8), and that is precisely why this opposition is essentially linked with using an affirmative and a negative assertoric operator,<sup>247</sup> while the other opposition primarily concerns the assertibles, and secondarily the assertions.

Three important corollaries to be gathered from this discussion are (1) that συμπλοκή must stand for the combination of the strong-hyparctic 'be' (expressed by the assertoric operator 'is' or 'is not') with the same assertible; (2) that the negation is in fact a denial; and (3) that the opposition between affirmation and denial is the contradictory opposition. The question may now arise whether in the case of contrary or privative modes of being — provided they *are* said

<sup>244</sup> Reading πρὸς τό with a number of manuscripts, taking up the previous πρὸς of 12b12; cf. at 12b15: πρὸς τὸ μὴ καθῆσθαι. See for the dative variant (in both b14 and b15) the critical apparatus in Minio-Paluello. Boethius successively has 'ad' and the dative construction.

<sup>245</sup> Minio-Paluello is wrong in omitting the subject's accusative τινα found in the Ambrosianus. Weidemann, 138.

<sup>246</sup> This does not rule out that e.g. things contrarily opposed can sometimes be said *with* combination. See below, 13b12ff., and my section 2.31.

<sup>247</sup> My section 2.31.

*with* combination, in as far as they are part of actual assertions, that is — the same should apply to them as to the things involved in a contradictory opposition. In fact, this question comes up in the chapter's concluding paragraph (13b12-35), and the answer is that for the former the necessary 'either-or' condition is missing. The discussion also contains some interesting remarks about the impact of a statement's having existential import on its truth-value:

*Ibid.* 10, 13b12-27: It might, indeed, very well seem that the same sort of thing does occur in the case of contraries said *with* combination, e.g. 'that Socrates is well' is contrary to 'that Socrates is sick'.<sup>248</sup> Yet not even in these cases is it *necessary* always for one to be true and the other false. For if Socrates exists one will be true and the other false, but if he does not both will be false; neither 'that Socrates is sick' nor 'that Socrates is well' will be true if Socrates himself does not exist at all. As for having and privation, if he does not exist at all neither is true, while not always one or the other is true if he does. For 'that Socrates has sight' is opposed to 'that Socrates is blind' as having to privation; and if he exists it is still not *necessary* for one or the other to be true or false (since until the time when it is natural for him to have sight both are false), while if Socrates does not exist at all again both are false, both 'that he has sight' and 'that he is blind'.

Thus in the case of contrary states of affairs the substrate's existence or non-existence is of importance. But with a pair of contradictory opposites things are different, since then, as we saw, the opposition is between the affirmative and negative operators. Hence in such cases it does not matter at all whether the subject exists or not:

*Ibid.* 10, 13b27-35: But with an affirmation and negation it is always the case that, no matter if he exists or does not, one will be false and the other true. For take Socrates's being sick and Socrates's not being sick: if he exists clearly one or the other of them will be true or false. And equally if he does not, for if he does not exist his being sick is false but his not being sick is true. Thus it would be distinctive of these alone, viz. whatever is opposed as affirmation and negation, that always one or the other of them is true or false.<sup>249</sup>

In chapter 11, 14a6ff., the difference with contrary opposites is once again explained:

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<sup>248</sup> Ackrill (37 and 110) and Oehler (1982, 29) needlessly render the Greek accusative *plus* infinitive phrases representing assertibles by using a finite verb construction ('Socrates is well' etc.) instead of *that*-clauses. Ackrill is right (110) that at 13b14-15 the Greek phrases are used to stand for linguistic tools, while later (14a10-11 and 14) they stand for states of affairs ('Socrates's being well'). For this feature see the semantic Main Rule, RIR; my section 1.71.

<sup>249</sup> Both passages are discussed in more detail in my section 2.31.



*Ibid.* 11, 14a6-14: With contrarily opposed states of affairs it is not necessary if one is the case for the other to be the case, too. For, if everyone were well, health would exist but not sickness, and, if everyone were pale, paleness would exist but not blackness.<sup>250</sup> Further, if Socrates's being well is contrary to Socrates's being sick, and that it is not possible for both to hold at the same time of the same person, it would not be possible if one of the contrary states of affairs were the case for the other to be the case, too; if Socrates's being well were the case Socrates's being sick would not.

It is clear, once again, that the combination (συμπλοκή) meant in this context amounts to adding assertoric operators to assertibles made up by an accusative *plus* infinitive construction, which is representative of a conceived state of affairs (πράγμα), to the effect, indeed, that the operator expresses someone's *applying* it to something of the outside world, either by asserting the assertible or by denying it. Thus if Socrates is healthy the conceived state of affairs of Socrates's being well can be truly applied, while that of his being sick cannot. At the same time it is clear from the entire discussion in chs. 10 and 11 that likewise in the case of 'things' opposed as affirmation and negation (such as Socrates's being sick and Socrates's not being sick), by these 'things', too, states of affairs (πράγματα) as expressed by assertibles should be understood, which can or cannot be truly applied to (things occurring in) the real world.

Three differences can then be stated between the contradictory opposition and the other three: (1) the former conveys the idea that the assertibles involved are actually asserted or denied ('de-asserted'), while the other three are as such confined to the formation of assertibles, which is prior to any truth claims;<sup>251</sup> (2) if the other three *are* part of assertions it is not *necessary*, unlike in the case of contradictory opposition, that one should be true, and the other false; and (3) the συμπλοκή involved in the contradictory opposition is by definition the one linking up the assertibles with an assertoric operator, while in the other oppositions the συμπλοκή may also be merely the onomastic one functioning within the assertible.

<sup>250</sup> The observation about the non-existence of blackness apart from black things betrays a downright rejection of Platonic Forms. The remark about the non-existence of sickness, on the other hand, might be acceptable to a Platonist who is faithful to the Master in casting aside the idea of negative Forms. See De Rijk (1986), 173-80.

<sup>251</sup> The difference may also be expressed by rendering the words κατάφασις and ἀπόφασις as used in the description of the contradictory opposition 'assertion' and 'denial', rather than using the generic terms 'affirmation' and 'negation'.

There is some discussion about the author's view of the way in which affirmative statements have existential import. Ackrill (111) wonders whether Aristotle really maintains that the non-existence of the subject always makes an affirmative statement false and a negative one true, or whether he only has singular statements in mind. I think that to Aristotle, the procedure of actual statement-making is always about particulars or collections of particulars (supposedly) existing in the outside world.

Considering this view of the statement-making procedure, there is good reason to ask (with Ackrill, 148f.) if *Int.* 11, 21a25-28, where it is claimed that 'Homer is a poet' does not entail 'Homer is', is in keeping with this position. Evidently, Ackrill believes that what Aristotle claims at *Int.*, 21a25-28 bears on the poet, Homer. However, what Aristotle says in that particular passage merely concerns the complex notion 'Homer's being a poet' qua referring to the existence of the Homeric poems, not of the poet himself. Therefore the term 'Homer' used in the assertible 'Homer's being a poet', is ambiguous, and this factor is bound to frustrate the entailment; my section 3.82.

In point of fact, the existential import of affirmative statements does not consist in their assertibles being affirmative, but in the use of an affirmative operator. The reason for this is that the notion of being conveyed by the assertible is merely what I have labelled earlier 'connotative or intensional being', not 'strong-hyparctic being', which is expressed by the assertoric operator. Once again, the meticulous distinction between unapplied assertible and assertion (or applied assertible) turns out to be of paramount importance.

#### 4. 86 *Priority, posteriority, and simultaneity*

In chapter 12, four main ways in which a mode of being may be called 'being prior' are enumerated (14a26-b8). The first and most strict way concerns the chronological sense of 'being prior', which is found in calling a thing 'being older' or 'more ancient'. Another, in fact the third one, concerns priority in terms of something's being arranged before something else, as e.g. in speeches the introduction is prior to the exposition. Sometimes, what is better and more valued is thought to be 'prior by nature'; this is the fourth way in which a mode of being may lead to assigning a thing priority over others.

4. 87 *On logico-semantic (non-)priority and the implication of 'being given'*

From the semantic point of view the second way that Aristotle mentions is the most interesting. It is concerned with the important notion of what is called 'reciprocating as to implication of being given' (ἀντιστρέφειν κατὰ τὴν τοῦ εἶναι ἀκολουθήσιν), which has already been given due attention in our discussion of relational being (my section 4.66):

*Cat.* 12, 14a29-35: Secondly, what does not reciprocate as to implication of being given. For example, what is one is prior to what is two, because if there is what is two it follows at once that there is what is one, whereas, on the other hand, if there is what is one there is not necessarily what is two; hence the implication of the other's being given does not hold reciprocally from what is one. Now that from which the implication of being given does not hold reciprocally is thought to be prior.

The semantic point Aristotle is trying to make clear in these lines is that if something [x] is brought up as being two, then there being given something [y] that is one is formally implied in the very designation 'being two'. Consequently, the 'implicant' has formal priority over the implied one.

In the second part of the chapter, the same notion of logico-semantic implication is further examined in the context of statement-making and truth and falsehood, where in a way another case of natural priority can be found:

*Ibid.* 12, 14b9-18: There are, then, this many ways of speaking of 'the prior'. There would seem, however, to be another manner of priority besides those mentioned. For of things which reciprocate as to implication of being the case (τοῦ εἶναι), that which is in some way the cause of the other's being the case might reasonably be called 'prior by nature'. And clearly there *are* some such cases. For there-being-a-man reciprocates as to being the case with the statement about it [this state of affairs, that is] being true: if there is a man the statement whereby we say that-there-is-a-man is true, and reciprocally — since if the statement whereby we say that-there-is-a-man is true, there *is* a man.

Thus there is a mutual implication of being given or being the case, meaning that if the assertible is true (i.e. can be truly applied) its content ('significate') is really the case, and conversely: if some state of affairs is really the case the assertible expressing it is true. There is nothing mysterious about this bilateral implication or equivalence, since it simply follows from Aristotle's definition of statemental truth.

And it is precisely because of the bilateral implication being purely definitorial that there is merely a unilateral causality:

*Ibid.* 12, 14b18-22: But the statement's being true is in no way the cause of the state of affairs's being the case (τοῦ εἶναι τὸ πρᾶγμα),<sup>252</sup> yet the state of affairs does seem in some way (πῶς) the cause of the statement's being true. For it is through the fact that the state of affairs is or is not the case that the statement is called true or false.

From the modern point of view it is somewhat awkward to speak of causality in this connection. I think we have to emphasize the reservation made by Aristotle saying 'in some way'; 14b20: πῶς). This special way is similar to the logical necessity spoken of in the definition of the syllogism, a manner of expression that likewise leads Aristotle to call the premisses the 'cause' of the conclusion.<sup>253</sup> That there is no question at all of any physical causality between the states of affairs being the case *vis-à-vis* the statement's truth was expressed by Medieval logicians by adding the condition, 'si propositio formetur' ('provided the proposition is actually framed'). In point of fact, Aristotle's exposition meets this condition in our passage by speaking (14b15-18) *expressis verbis* of an *applied* assertible: "If there is a man the statement *whereby we say* that-there-is-a-man is true, and reciprocally, since if the statement *whereby we say* [...]"<sup>254</sup>

Ackrill (112) is of the opinion that it is odd to speak, with Aristotle (14b14-17), of "a reciprocal implication of *existence*" (Ackrill's rendering of εἶναι) as though the existence of a man really implies, and is implied by, the existence of the true statement that there is a man. He rightly observes (*ibid.*) that in his discussion of the example, Aristotle himself does not adhere to this view which, on the face of it at least, might appear from his present manner of speaking, viz. in terms of "causality, in some way". However, (1) as for what can seem a rather odd manner of speaking, Aristotle is only following the common Greek idiom of using one word (αἴτιον) indiscriminately for our 'cause' and 'reason'.<sup>255</sup> And (2) much of the oddity will disappear if we do not take the εἶναι of the true λόγος to mean the 'existence' of the λόγος qua linguistic tool, but rather to bear on its significante's

<sup>252</sup> Lit. 'of <the fact> that-the-pragma-is-the-case'; cf. 5, 4b8-10.

<sup>253</sup> *APr.* I 1, 24b18-22. The conclusion is said to follow 'because of them' (διὰ ταῦτα).

<sup>254</sup> For the relevance of the assertible being actually applied in an assertion see my section 3.66.

<sup>255</sup> Ackrill rightly argues (1981a, 360, n.2) that neither 'cause' nor 'explanation' is an exact equivalent of αἰτία, and proposes to speak of the four 'because's'.

'being the case'. What remains then is Aristotle's (and indeed our own) ambivalent use of the phrase 'state of affairs' (πρᾶγμα), which covers indiscriminately both the state of affairs *conceived of* and the real state of affairs in the outside world referred to by this phrase. In any case, Aristotle was fully aware that an assertible's ('that-clause') being the case implies its being applied (or putatively being applied) by someone to some thing(s) of the outside world, in other words, that the assertible's content ('significate') is said to be (or not to be) the case in the outside world.

In the *Lexicon* (*Met.* Δ 11) the notions of priority and posteriority are enumerated more systematically.<sup>256</sup> There 'what is prior' is defined (1018b9ff.) as

(1) 'that which is nearer some determined starting-point (ἀρχῆς τινὸς ὀρισμένης) either absolutely or respectively', the diverse respects being place, time, movement, power, arrangement (1018b12-30).

(2) 'that which is prior in acquaintance' (γνώσει). This type of priority is differentiated into priority according to the definiens, such as the universals are prior to the particulars, but the latter are prior in respect of sense-perception. Likewise, the coincidental is definitorially prior to the whole, as for instance the mode of being educated (i.e. this particular instantiation) is prior to the educated man (as its particular instance)<sup>257</sup> (1018b30-37).

(3) 'that which is prior consequentially': "Again, the affections of what is prior are called prior, as e.g. straightness to smoothness; for the one is an affection of a line in its own right, the other of a surface" (1018b-1019a1).

(4) 'that which is prior in nature and subsistent mode of being' (κατὰ φύσιν καὶ οὐσίαν).<sup>258</sup> A thing has this kind of priority when it is possible for it to be without other things, whereas the latter cannot be without them. Aristotle incidentally amplifies that this type of priority was used by Plato; it is indeed vital for marking off the

<sup>256</sup> See the pertinent comments in Ross I, 316-8 and Kirwan (1971), 153-6.

<sup>257</sup> Aristotle explains (1018b35-37): "For without the part the definiens will not be complete, though, on the other hand, it is not possible that there is a form of being educated without there being some particular thing that is educated". It cannot come as a surprise that Aristotle rebukes the suggestion that the definitorial priority should support the assumption of Platonic Forms, which are supposed to be in existence outside the particulars sharing them. Compare his relentless remark at *Cat.* 5, 2b6: "So if the primary substances did not exist it would be impossible for any of the other things to exist".

<sup>258</sup> This phrase is, I take it, a hendiadys, which refers to something's natural priority owing to its being in existence independently of something else.

trancendent mode of being of the Forms from the way in which the particulars depend on them. Now, since there are many modes of being, this priority can be differentiated accordingly. First, the substrate has priority, and for this reason the ousia has. Second, part as against whole, matter as against concrete substance, are prior in potentiality, posterior in actuality (1019a1-11).

The classification of the senses of 'prior' as found in *Cat.* 12 can roughly be reduced to the more detailed one of *Met.* Δ 11.<sup>259</sup> Likewise, the many cursory distinctions of various senses of priority fit in well with the doctrinal canon underlying the expositions of *Cat.* 12 and *Met.* Δ 11.<sup>260</sup>

#### 4. 88 *On being simultaneous*

In the chapter on simultaneity (13), then, the things called simultaneous (ἄμα λέγεται) are discussed. First, the rather trivial simultaneity in respect of time is mentioned. The lion's share, then, is for the things called 'simultaneous by nature', which are defined as those "reciprocating as to implication of being given (being the case), provided neither is in any way the cause of the other's being given". In accordance with what is said in chapter 7, what is double and what is half are instanced (6b30-31), which reciprocate, since if there is a double there is a half and if there is a half there is a double, but neither is the cause of the other's being given (14b29-33).

Next, the property of being simultaneous by nature is applied to the relationships existing between the different levels (genera, species, individuals) within one category:<sup>261</sup>

*Ibid.* 13, 14b33-15a4: Also, co-ordinate species of the same genus are called simultaneous by nature. It is those resulting from the same division that are called co-ordinate (ἀντιδιηρημένα), e.g. bird and beast and fish. For these are of the same genus and co-ordinate, since animal is divided into these, viz. into bird, beast, and fish, and none of them is prior or posterior. Now things of these kinds are thought to be simultaneous by nature. Each of these might itself be further

<sup>259</sup> Ross I, 317; Kirwan, 153.

<sup>260</sup> These distinctions always play a central role in the discussions at hand. So *Phys.* VIII 7, 260b17-19 and 261a13-14; *Met.* A 8, 989a15-16; Z 1, 1028a31-b2; Z 13, 1038b27-28; Θ 8 *passim*; M 2, 1077a19 and 1077b2-4; *GA* II 6, 742a21; *Rhet.* II 19, 1392a20.

<sup>261</sup> In fact, only the category of the subsistent mode of being (= οὐσία) is examined, as is also the case in the later 'Arbor Porphyriana'. Part of the inferential relationships were already discussed in chapter 3, and practised in chapter 5.

divided into species (I mean beast and bird and fish); so there, too, those resulting from the same division of the same genus will be simultaneous by nature.

Between genera and species, on the other hand, there is natural priority of the genus over its species, since genera do not reciprocate as to implication of being given, that is to say, there is only a unilateral implication, from the species to the genus. For instance, if there is a fish there is an animal, but if there is an animal there is not necessarily a fish (15a4-7).

Like the priority, the simultaneity between different modes of being should be understood in terms of semantic entailment. If you bring up something as a fish your calling it an animal is implied (and this can be brought to your attention during the disputation), whereas if you call something an animal you cannot, by implication, be taken to regard it as a fish.

Natural simultaneity of distinct modes of being plays a role in various arguments.<sup>262</sup> At *Top.* V 3, 131a12-26, this property features in the discussion about how to unmask incorrect assignments of properties to things. In chapter 7 of *Cat.* (7b15-8a12) the modes of relational being taken as 'simultaneous by nature' was thoroughly discussed (my section 4.67). In *Met.* A 6, 1071b22-1072a18, a difficulty concerning act and potency against the doctrine of the First Mover is expounded and solved in terms of the *seeming* priority of potential being over actual being.

#### 4. 89 *Change as observed in four kinds of categorial being*

Chapter 14 is about the different kinds of change (κίνησις) which may occur in things in accordance with the way they are categorially brought up for discussion. They are six: generation, destruction, increase, diminution, alteration, and locomotion.<sup>263</sup> Their being distinct should not be questioned, except for alteration (ἀλλοίωσις),

<sup>262</sup> For discussions about temporal and local ἅμα ('together') see e.g. *Phys.* V 3, 226b21-25 (cf. *Met.* K 12, 1068b26-30); *Phys.* VII 2, 243a4-5 ("by 'together' I mean that there is nothing intermediate between them"); *Phys.* IV 10, 218a25-29; *Met.* A 3, 1070a21-23, where moving causes are described as temporally pre-existent, but those which are as a form (λόγος) are simultaneous with their effects. "For when a man is healthy, then there exists also health". For the use of λόγος in the sense of εἶδος see my *Index* s.v.

<sup>263</sup> In *Parm.* 138B and *Theaet.* 181A, Plato distinguishes between locomotion and alteration. In *Tim.* 40A-B, we find circular motion and "the other five motions"; the tenth book of the *Laws* knows (894C7) of ten types of motion.

since it might be asked “whether it is not perhaps necessary for what is altering to be altering in virtue of one of the other kinds of change” (15a18-20). This is, however, not the case (οὐκ ἀληθές ἐστίν), for in fairly well all that befalls us, we undergo alteration without partaking of any of the other changes. For what changes in this respect does not necessarily increase or diminish, and so on. Besides, if so, the fact that a thing alters would, as such, entail that it also increases or diminishes etc., or the other way round; but this is not necessary, since e.g. a square is increased by the addition of a gnomon, but is not thereby altered (15a20-31).<sup>264</sup>

Finally, the author (15b1-16) undertakes to determine the differences between the several changes by stating contrarities between them. The general contrary to change is ἡρεμία.<sup>265</sup> There is change in just four of the modes of categorial being: in substantial (subsistent) being, generation and destruction, in quantitative being, increase and diminution, in qualitative being, alteration, and in the mode of being somewhere, locomotion. In the opening chapter of *Physics* III, where nature is defined as a ‘principle of motion and change’, it is claimed (200b32-201a3; against Plato) that since there is no such thing as Motion over and above the outside things, it is always with respect to essential or quantitative or qualitative or locative being that what changes changes. It is impossible, Aristotle continues, to find (as people of our [Platonic] circle assert) anything common to these modes of being which is neither a ‘this’ [viz. a subsistent mode of being] nor a quantitative nor a qualitative mode nor any of the other categorial modes.

#### 4. 9 *On the different kinds of ‘having’*

The concluding chapter of *Cat.* presents an overview of various uses of ‘having’ (τὸ ἔχειν):

<sup>264</sup> Ackrill rightly remarks (112) that, when at *Phys.* VIII 7, 260a26-b7, Aristotle argues that locomotion is presupposed by alteration and that alteration is presupposed by increase, this does not conflict with the claim in *Cat.* that the six kinds of change are all distinct from one another, and that what is undergoing one kind is not necessarily undergoing any other.

<sup>265</sup> *Met.* A 7, 988b4; *Phys.* III 2, 202a4; 5, 205a17; V 2, 226b15-16.; V 5-6, and *passim*. That to Aristotle, ἡρεμία is not, as such, the same as passivity appears from the nature of his First Mover. *Met.* Λ, chs. 6-8. Guthrie VI, 267-76; Oehler (1984), 285.



*Cat.* 15, 15b17-32: 'Having' is spoken of in a number of ways. (1) As a state (ὥς ἔξιν) and disposition (διάθεσιν) or some other quality (ποιότητα); we are said to 'have' knowledge and virtue; (2) or as a quantity, like the height someone may have: he is said to have a height of five feet or six feet; (3) or as things on the body, like a cloak or tunic; (4) or as a part, e.g. a hand or a foot; (5) or as in a container, like with the measure of wheat or the jar of wine (for the jar is said to 'have' wine, and the measure wheat, so these are said to 'have as in a container'); (6) or as a possession (for we are said to 'have' a house and a field). (7) We are also said to have a wife,<sup>266</sup> and the wife in question (ἡ γυνή) a husband; but this seems to be a very strange way of 'having', since by 'having a wife' we signify nothing other than that she lives with him (συνοικεῖ). — Some further ways of 'having' might perhaps come to light, but this is a fairly complete enumeration of those commonly spoken of.

It is commonly assumed that this survey has nothing to do with the categorial mode of being (ἔξις) announced in the enumeration of chapter four.<sup>267</sup> I think this assumption is rash and ill-considered. For one thing, the third sense is precisely the one meant at 2a3 ("<examples> of having: has-shoes-on, has-armour-on"). For another, all these senses seem to derive from one focal meaning, which is best characterized, I take it, as 'possessing something that functions as a predominant ontic determination', or 'possessing a feature vital to somebody's appearance'.

Let me explain why all these senses are concerned with a mode of 'having' which clearly goes beyond mere 'possession'. Generally speaking, one should not, to begin with, press the grammatical distinction between a verb's transitive and intransitive use.<sup>268</sup> As for ἔχειν,<sup>269</sup> it is used intransitively for 'holding oneself or keeping so and so', or simply 'be', frequently followed by an adverb of manner (οὕτως, καλῶς, κακῶς etc.). Thus it presents the common Greek construction to indicate a state of being, more than once with the

<sup>266</sup> Note that the subject 'we' is silently taken to stand for a *male* human being; the definite article before γυνή seems to point in the same direction; for this use of the definite article see Verdenius (1981), 351.

<sup>267</sup> Ackrill, 112; Oehler (1984), 287. Boethius comments upon the seventh sense (*In Arist. Catg.*, col. 294A7-15 Migne: "Dicitur etiam quis habere uxorem, quae scilicet significatio nulli supradictae communis est, sed, ut ipsi Aristoteli videtur, longe diversa est haec significatio ab 'habendi' praedicamento. Non enim proprie 'habemus' uxores, sed quod 'habere' quis dicatur uxorem, hoc significat habitare cum eo uxorem; 'habere' enim 'habitare' dicimus, ut est 'Socratem habent', idest 'cum Socrate habitant atque eum colunt'").

<sup>268</sup> Take e.g. the use of verbs like ἄγειν ('to march') in Greek, or 'to move', 'to sell', 'to print' etc. in English, and similar uses in some other languages.

<sup>269</sup> Liddell & Scott, *s.v.* B. I, II, IV.

connotation of a certain duration: 'to keep balanced, unmoved, or still'.<sup>270</sup> A similar durative sense is expressed by this verb when it is used transitively as an auxiliary following an aorist participle, to afford the action expressed by this participle a perfect or resultative sense, a procedure that comes close to the use of this verb itself in the perfect tense.<sup>271</sup> Another way to express duration is found where the participle ἔχων is added to a present (or present-perfect) tense verb, to indicate the durative aspect of the action.<sup>272</sup>

Hence it is quite understandable that the verbal noun ἔξις is said by Aristotle to have three main senses: (1) possession in the sense of 'being invested or endowed with', (2) 'state' or 'disposition', (3) 'portion of such a disposition'.<sup>273</sup> Once again, it is not just any possession that is meant, but rather a prominent way of being and acting or functioning in accordance with this 'having'.<sup>274</sup> The special character of ἔξις is underlined in the *Lexicon* by pointing out the reciprocal activity between the possessor and the thing possessed, meaning that both the state is 'had' ('possessed') by the possessor and the latter is possessed ('had') by the state as well. To Aristotle, it is precisely this reciprocity which makes it nugatory to speak of 'possessing the state possessed':

*Met.* Δ 20, 1022b4-14: We call 'having' (ἔξις), in one sense, what is a kind of activity of what 'has' and what is 'had' (τοῦ ἔχοντος καὶ ἐχομένου), like a certain 'doing' (πρᾶξις) or movement (κίνησις). For whenever one thing produces and another is produced, there is producing (ποίησις)<sup>275</sup> between them; just so there is wearing between

<sup>270</sup> Homer, *Ilias* XII, 433, *Od.* 19, 494; Plato, *Crat.* 399E. For Aristotle, Bonitz, *Index* 305a55-306a20.

<sup>271</sup> Herodotus, *Hist.* I, 37: ἀποκληίσας ἔχεις (lit. 'after closing the door you keep it so' = 'you keep the door closed'); Sophocles, *Oed. Col.* 1140: θαυμάσας ἔχω ('I am surprised'); also Plato, *Phaedrus* 257C. Thus an active participle like ἀποκληίσας connotes the passive participle κεκλημένην, where the durative or resultative aspect is transferred to the object's attributive determination, as in Later Latin 'epistulam quam habeo scriptam', French: 'la lettre que j'ai écrite'. A thorough-going discussion of such periphrastic constructions in Greek is found in Aerts (1965), 128-77, who convincingly argues (135) that often its meaning lies somewhere between that of a resultative and situational perfect.

<sup>272</sup> Aristophanes, *Clouds* 509: τί κυπτάζεις ἔχων; ('why do you keep poking about there?'), *Eccles.*, 853-4: τί γὰρ ἔστηκ' ἔχων ἐνταῦθ'; ('why do I keep standing there?'); Plato, *Gorg.* 490E4: φλυαρεῖς ἔχων ('you keep chattering').

<sup>273</sup> *Met.* Δ 20. Also Benveniste (1966), 69; 198ff.

<sup>274</sup> In Plato, *Rep.* IV, 433E12, there is a remarkable juxtaposition of ἔξις and πρᾶξις, where πρᾶξις has the usual ontic connotation of 'doing well' etc. Compare the several descriptions of the ἔξις of knowledge at *Theaet.* 197B-C.

<sup>275</sup> Elsewhere Aristotle uses the word ἐνέργεια, which came to be the usual term with the grammarians. See Van Ophuijsen (1993), 752-5.

one who wears clothes and the clothes worn. Obviously it is not possible to 'have' such a 'having', for we shall go to infinity if there is such a thing as 'to have the having of the thing had'. Cf. Δ 23.

The sliding scale between 'having' and 'being had by' found in the phrase 'having a wife or husband' was pointed out by Simplicius.<sup>276</sup> In the twelfth century this equation was also well observed by Peter Abelard, who in his commentary on *Cat.*, explicitly links it with the equivalence of having a form and being informed by it. On account of the aforesaid nugatory manner of expression Abelard suggests that perhaps we should take 'to have' as a noun that expresses the possession of a thing which both 'has' as well as it is 'had'.<sup>277</sup>

All this should be put in a broader perspective. The pairing of having a form and being informed by it is typical of Greek philosophical thought. What you *have*, that you *are*. From Socrates onwards, someone's *being* is marked by the form he is endowed with. A similar view holds for Plato. To him, being such-and-such comes down to being endowed with an immanent form by which one partakes of a transcendent Form.<sup>278</sup> Analogously, in Aristotle's ontology, by inhering in some ὑποκείμενον, the form (εἶδος) 'held' determines a thing's being.

On this frame of reference, the types of 'having' enumerated in *Cat.* 15 all circle around the focal meaning of, so to speak, 'having some ontically determinant feature'. On this interpretation, the seven senses enumerated above may be understood as follows: (1) 'to have knowledge' equals 'to be knowledgeable'; (2) 'to have a height of five feet' is the same as 'to be five feet high' (or, say, 'to belong to the class of people of that height'); (3) 'to have-arms-on', too, signifies a state or status; see below; (4) 'to have two feet' or 'to be two-footed' is also a state of being and may be opposed to e.g. 'being four-

<sup>276</sup> CAG VIII, p. 437<sup>3-5</sup>: τὸ δὲ γυναῖκα ἔχειν τὸν ἄνδρα καὶ τὴν γυναῖκα ἄνδρα ἁλλοτριώτατον εἶναι φαμεν, καὶ ὅτι ἀντιστρέφει (οὐδὲν γὰρ μᾶλλον ἔχει ἢ ἔχεται). I think the same feature is indicated by the omission of the definite article before ἐχομένου in the opening line of the chapter (1022b5).

<sup>277</sup> *Logica Ingredientibus*, 258<sup>25</sup>-259<sup>3</sup>: "Si enim ex forma quae habetur (sicut ex albedine) innasceretur 'habere': cum ipsum quoque habere forma sit, profecto ex unoquoque habere aliud habere usque in infinitum nasceretur. Cum itaque dico me habere formam [...], nil aliud praedicari nisi formam intendo, ac si dicerem 'formatum esse'. Quaeritur autem, cum dicimus haberi, quid per 'haberi' significemus. Sed fortasse 'habere' hoc loco nomen est proprietatis rei tam habentis quam habitae". Note that Abelard was not at all familiar with Simplicius's commentary. No remark of this kind is found in Boethius's extant commentary on *Cat.*

<sup>278</sup> The function of the Form in its immanent status is extensively discussed in De Rijk (1986), 18-21; 55-63; 106-9; 327-30.

footed' or 'being deprived of feet'; (5) a jar having wine (or 'wine-jar') is opposed to a jar being empty,<sup>279</sup> or being, say, an oil-jar; (6) to have a house comes to being a house-owner (or land-lord), or to not being a vagrant' (7) 'to have a spouse' signifies the state of being espoused as contrasted with being a bachelor.<sup>280</sup>

It may be useful to compare this picture to a parallel in modern word formation, viz. the use of the suffix '-ed' (old English '-ede'), which serves to connote the possession or the presence of the attribute or thing expressed by the cognate noun, such as 'skilled', 'able-bodied' etc. As we saw before (section 4.64, n. 160), a similar kind of word formation is found in other Indo-European languages as well. Basically, such attributes designate a thing's typical attributes which in a way are 'essential' ('ontically determinant') to it. For example, the ἔξις indicated by Aristotle's standard examples (ch. 4, 2a3) ὑποδέδεται and ὥπλισται — where the use of the (resultative-durative) perfect tense is crucial — really expresses a typifying, essential mode of being or behaving oneself.

Taking now Aristotle's first example: 'having-shoes-on', 'being shod' may express a mode of being which is appropriate to certain circumstances or a way of life, and not just an incidental event of not being bare-footed.<sup>281</sup> Thus we are told by Macrobius<sup>282</sup> that Aristotle criticized Euripides because in his *Meleager*, he makes a messenger describe Etolians wearing footgear on their left foot only, whereas they used to be bare-footed on the left, and have their right foot shod. A similar use of the perfect tense to indicate a ἔξις is found in Aristotle's work on the parts of animals, where the author contrasts the various ways of self-defence available to human beings with the one-sided defensive means of animals, which forces them, so to speak, to sleep 'with sandals on', "never laying aside whatever serves as a protection to their bodies".<sup>283</sup>

As for Aristotle's other example, ὥπλισται, it stands for the ἔξις of 'having-armour-on', 'equipped as a heavy-armed foot-soldier', 'being

<sup>279</sup> The connotation of permanence is, of course, missing here.

<sup>280</sup> By saying (15b28-30) that "to 'have' a wife seems to be a very strange way of 'having'", Aristotle seems to emphasize that in a society of free citizens, the verb 'to have' is far from conveying its connotation of mere possessivity.

<sup>281</sup> So a discalced Carmelite is not a calced Carmelite who has taken off his sandals.

<sup>282</sup> *Saturnalia* V 18, 19, ed. L. Jan, p. 460 = Arist., *Fragmenta* I, *Dialogi*, nr. 62, p. 1486b21-23.

<sup>283</sup> *PA* IV 10, 687a23-31.

a man-at-arms', probably as distinguished from the kit of light-armed people, such as archers and slingers. Once again, this expression has to do with what is more than an incidental situation, in that it is significative of a state or status. From the societal point of view, to be a *ὀπλίτης* even implied the possession of full civic rights, so Aristotle opposes this class to that of the handicraftsmen and artisans (*βάνανσοι*) — privileged people who in an oligarchy formed a separate class of their own<sup>284</sup> ("being required as they are to have a high qualification, or to be members of a political sodality", in Aristotle's words).<sup>285</sup>

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<sup>284</sup> An Athenian had to provide his own military equipment. Only the middle-class of higher craftsmen and merchants could afford the heavy armour of the hoplites.

<sup>285</sup> *Pol.* VII 4, 1326a21-25, and V 6, 1305b30-33. — Incidentally, the English word 'able-bodied' likewise indicates a long-lasting, characteristic state of health, not a healthy state following after someone's recovering from a disease. In the expression 'the propertied class' the connotations of idiosyncrasy and permanence neatly coincide.

*Additional note* (cont. of n. 157, p. 416): Compare ps.-Gilbertus Porretanus (end 12th cent.); *Liber sex principiorum* VII, 69: "Habitus autem est corporum et eorum que circa corpus sunt adiacentia secundum quam hec quidem habere, illa vero haberi dicuntur." *Aristoteles latinus* I 7, p. 51<sup>11-13</sup> (ed. Minio-Paluello).

## CHAPTER FIVE

### THE *TOPICS* AND THE *SOPHISTIC REFUTATIONS*

The *Topics* (*Top.*) and *Sophistic Refutations* (henceforth *SE*) are generally regarded as belonging, with *Cat.* and *Int.*, to the earliest period of Aristotle's teaching activity. The two treatises are closely connected, as may appear from the fact that the final section of *SE* is an epilogue to both treatises, and the author twice refers to *SE* under the title *Topica*.<sup>1</sup> The two works were certainly written before the *Analytics*.

Presumably, *Top.* II-VII, ch. 2, form an original treatise presenting a collection of commonplaces of argument (τόποι) which were already current in the Platonic circle, and are characterized by Sir David Ross (1948: 59) as "the pigeon-holes from which dialectical reasoning is to draw its arguments". The rest, including *SE*, seem to have been written after the discovery of the 'syllogism' in the sense of 'deductive argument', but before the *Analytics* were composed. The *Topics* deal with modes of constructive and destructive argumentation which, though admissible in their sort, fall short of the requirements of epistemonical precision.<sup>2</sup>

#### 5. 1 *Preliminary matters (Top. I, chs. 1-4)*

From the viewpoint of semantics, the first Book is the most interesting. It opens with the design of the treatise, including its purpose, uses, method and means. Its purpose is, Aristotle says (100a18-21), to discover a method by which we shall be able to reason (συλλογίζεσθαι) from generally accepted opinions about any problem set before us, and shall ourselves, when sustaining an argument, avoid asserting anything self-contradictory (ὑπεναντίον). Reasoning (συλλογισμός) is defined (100a25-27) as an argument (λόγος) in which, certain things having been laid down, something other than these things necessarily follow by the mere fact that they have been

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<sup>1</sup> *Int.* 11, 20b26; *APr.* II 17, 65b16.

<sup>2</sup> For a historical and doctrinal assessment of the *Topics* see Smith (1997), *Introd.*, XI-XXX.

laid down. Next, reasoning is divided (100a25-101a24) into its three main types: epistemoniic, dialectical, and contentious (ἐριστικός), and with these paralogisms are contrasted, being a process of fallacious reasoning based on assumptions peculiar to a special discipline.<sup>3</sup>

What we are interested in is the dialectical argument. It is defined (1, 100a29-30; 100b21-25) as the argument which reasons from generally accepted opinions, the latter being those which commend themselves to all people or to the majority or to the wise, that is to say, to all of the wise or to the majority or to the most famous and distinguished among them.<sup>4</sup>

The treatise has three aims: it is useful with a view to (1) mental training — whether as opponent or respondent<sup>5</sup> — (2) any conversations whatsoever, and (3) acquiring pieces of philosophic knowledge. The last goal is the most appealing, it seems, since in scientific investigations it is advantageous to be able to raise difficulties *pro* and *con*, so we shall more easily discern truth and falsehood, when encountering them. In addition, the starting-points of the several disciplines, which themselves are not susceptible of epistemoniic proof, can be best arrived at when starting from a comparative examination of common opinions in the manner dialectic takes them into consideration, because it enables us to scrutinize things closely (ἐξαστική γὰρ οὐσα), and therefore has access to the starting-points of all methods of inquiry.<sup>6</sup>

Chapter 4 discusses the basic ingredients of dialectical method, viz. the subjects of the dialectical arguments and the materials they are made up of. The prevailing rule is that the origins of the arguments are equal in number and identical with the subjects of the reasonings; for arguments arise from propositions (προτάσεις), while the subjects of reasonings are problems (προβλήματα). This means that

<sup>3</sup> G.E.R. Lloyd (1979, 62-5) rightly discusses this passage in the broader context of Aristotle's analysis of the various modes of reasoning.

<sup>4</sup> Smith (1997), 43-8. Cf. *Top.* III 1, 116a13-22. At VIII 2, 157b32-33, the dialectical premiss is characterized as "one against which there is no objection, holding as it is in many instances".

<sup>5</sup> See Book VIII, 4.

<sup>6</sup> *Top.* I 2, 101a25-b4. Smith (1997), 51-5. *Pace* Smith (53f.), Aristotle here seems to allude to the procedure of induction (discussed in I, 12) such as it is practised in *Met.* Γ for 'proving' the laws of non-contradiction (LNC) and excluded middle (LEM). See my section 7.5 in Vol. II. There is no reason to follow Smith (*ad loc.*) in connecting the phrase 'to the starting-points etc.' with ἐξαστική instead of ὁδὸν ἔχει. The latter construction is more natural, although the phrase ὁδὸν ἔχει can be used absolutely (as at *HA* IX 40, 625a13, where ὁδὸν μὴ ἔχουσιν means "they have no way to get through").

in any dialectical discussion, the subject-matter (which is in fact made up of states of affairs)<sup>7</sup> is expressed either by a proposition or a problem formula. Before laying bare the grammatical difference between proposition and problem, Aristotle deals with the most important likeness between them, viz. their sharing the same ingredients, both being made up of four items, genus (including the 'generic' differentia), definiens, proprium, and accidentis:

*Top.* I 4, 101b17-25: Every proposition and every problem discloses either a thing's genus or proprium or accident; for in fact (καὶ γάρ) the differentia, applying as it does to a genus, should be ranked with the genus. But since one sort of proprium signifies the quiddity (τὸ τί ἦν εἶναι)<sup>8</sup> while another does not, let the proprium be divided into both the aforesaid sorts and let that which signifies the quiddity be called a 'definiens' (ὅρος), and let the remaining one be designated as 'proprium', in accordance with the traditional nomenclature (ὀνομασίαν). It is clear, then, from what has been said that according to the division just made, there are four elements in all, namely either property or definiens or genus or accident.

Next it is claimed (101b26-37) that these items are nothing but the elements problems and propositions are made up of, and that the way the latter are constituted make them differ. Propositions are formed thus: "Is not 'being'<sup>9</sup> a two-footed land animal' the definiens of 'being a man'?", or "Is not 'being an animal' the genus of 'being a man'?" while a problem is formed when we say "Is 'being a two-footed land animal' the definiens of 'man', or not?". So they are equal in number, for of any proposition you can make a problem, just by changing the turn of the phrase.

Clearly, a problem and its matching proposition are made up from the same dictum,<sup>10</sup> e.g. '[that "being an animal" is the definiens of "being a man"]'. Any problem can be changed into a proposition.<sup>11</sup>

The propositional structure of a dialectical thesis does not imply that the different relationships referred to by the four 'paradigms of

<sup>7</sup> *Top.* II 8, 114a7-12; III 6, 120a6-32, where the problems and propositions are (grammatically) dictums and (semantically) states of affairs (my 'assertibles').

<sup>8</sup> For the use of the imperfect tense ('imperfectum philosophicum') ἦν see my *Index*. Smith follows (1997, 60) the commentary tradition assuring us that 'was' has no temporal significance and thus amounts to 'is'. The verb has indeed no past sense, but is supposed to refer to a past moment, viz. the time the initial question was raised.

<sup>9</sup> For this connotative or intensional 'be' see my section 1.64.

<sup>10</sup> Notice that henceforth the labels 'dictum' and 'that-clause' can be used with regard to (the surface structure of) Aristotle's examples, in cases, that is, in which, unlike *De interpretatione*, Aristotle leaves deep structure out of consideration.

<sup>11</sup> *Top.* II 2, 110a10-13.



assignment' (called later on 'predicables')<sup>12</sup> between the substrate and the attribute bear on the use of different sentence predicates. These paradigms should instead be understood in terms of 'appellation' or 'naming' by which the subject put forward for dialectical discussion can be brought up. This is clear from Aristotle's treatment of the definiens: the ὅρος is not a definition in the sense of 'definitional statement' ('[x] is [y]'), but a definiens [y] which can be used as a stand-in for [x].<sup>13</sup> That is why the definiens — which, on occasion, serves for disclosing the quiddity not of the substrate [x] but the attribute [y], including coincidental attributes, and thus is concerned with the whole range of what is signified by the three others — obtains a treatment different from the others. So the definiens is not on a par with the other three. It may designate a thing according to its complete quiddity (the later 'species'), or an incomplete one (genus or differentia), or even (as a 'describens', as it was later put) according to one of the thing's coincidental features.

Small wonder, then, that to Aristotle the definiens was "both the most venerable and the most important subject of debates".<sup>14</sup> The comprehensive role of the definiens and of the procedure of defining should be considered in connection with what Aristotle tells us about the subject-matter in *APo.*, where 'to define' a thing comes down to identifying it as satisfying a certain (subsistent or coincidental) quiddity.<sup>15</sup>

On this view, Smith (57f.) seems to be on the wrong track when explaining the fact that Aristotle sometimes "omits to mention definition in terms of Aristotle's approach being argumentative, not simply expository", and because he "is justifying his more sophisticated approach to an audience who can be assumed already to know the terminology". No doubt Aristotle's audience was acquainted with the terminology, so familiar to the Early Academy, and with the prominent role of defining in particular, but there is no question of

<sup>12</sup> For the inept and infelicitous label 'predicable' as used for what Aristotle in *Top.* I, chs. 5-6 and 8-9 has in mind see my section 5.24.

<sup>13</sup> When commenting upon ch. 7, 103a23-31, Smith seems to be fully aware of the stand-in function of the 'predicables', and to take it in terms of naming and designation, not statement-making. He says (1997, 70f.) that "Aristotle most likely is thinking of different ways of indicating *something which is the same as X* [his italics]: I can do so by using a word with the same meaning as X, or X's definition, or X's unique property, or some expressing which under the present circumstances just happens to designate the same thing as X".

<sup>14</sup> Smith (1997), 58.

<sup>15</sup> My sections 6.53-6.58.

omitting to mention the definition. We will have some more opportunities to find definition being singled out as governing the entire procedure of applying the paradigms of assignment to discover inferential relationships existing between the different categorizations used to bring up the things under discussion.

### 5. 2 *The categories and the “paradigms of assignment” (‘predicables’)*

Any reasoning makes use of the inferential relationships between the different categorizations. For instance, one can only infer from ‘[*x*]’s being an *F*’ to ‘[*x*]’s being a *G*’ if the categorial mode of being an *F* is shown to imply being a *G*, e.g. because of *G* being the genus or the definiens or the ‘*proprie proprium*’ of *F*. That is why a correct and effective argument requires the appropriate categorization of the objects under discussion, with a view to the inferential relationships between the different modes of being according to which these objects can be called up.

### 5. 21 *The so-called ‘predicables’ introduced in Top. I, 5-6 and 8*

*Top.* I, chs. 5-6 and 8 is where the four items introduced by Aristotle in ch. 4 come in — which, as we shall argue for later on, in fact form a second-order classification by which we can arrange the several (substantival and adjectival) names in accordance with their mutual relations of inference. Along these lines of inference, common names like ‘man’, ‘tree’, ‘stone’, ‘triangle’, ‘animal’, ‘rational’, ‘sensitive’, ‘body’ (‘corporeal’), ‘figure’ are co-ordinated. We have to wait until I, 9 for Aristotle’s view of how these four items are to be integrated into the scheme of categories.

To say, as is commonly done,<sup>16</sup> that at this point Aristotle introduces the doctrine of the ‘predicables’, which concerns the variety of

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<sup>16</sup> E.g. Ross (1948), 57; Frede (1987), 33; Smith (1997), 57. For that matter, the usual rigid association of κατηγορία with the syntactical heading ‘sentence predicate’ instead of the semantic ‘attribute’ seems to be at the basis of all the difficulties raised on its proper nature, quite apart still from the acceptance or selection of the ‘S is P’ construal as representative of Aristotle’s basic statement-making utterance. De Rijk (1980), 61f.; (1988), *passim*; (1993), and my present sections 1.51; 2.14-2.15. Incidentally, the common mistaking λόγος, (ὅρος, ὀρισμός) for ‘definition’ instead of ‘definiens’ is on the same footing. — Although Smith continually renders ὅρος ‘definition’ instead of ‘definiens’, he rightly assesses (60; cf. 58 re 101b19-23) λόγος (‘phrase’, ‘account’), qua counterpart of ὄνομα, in onomastic, not in apophantic terms, as is usually done by other commentators.

relationships between the subjects and predicates of problems and propositions is inaccurate for two reasons. Firstly, Aristotle's account of the statement-making utterance makes no reference to a sentence predicate or a copula. Instead, any statement is made up of a dictum (or, taken in its deep structure an 'assertible', most of the time<sup>17</sup> consisting of a substrate and an (adjectival) attribute) *plus* an assertoric operator, and does not contain the sentence subjects and predicates of traditional logic. Secondly, it is not, properly speaking, relations between that which is substrate and that which is attribute that are considered, but the second-order types of designation, or, to put it otherwise, the substrate and its belongings *qua brought up as so-and-so*.

In fact, the inferential relationships, which were already given some attention in chapter three of *Cat.* and applied in some discussions in chapter 5 (3a15-28 and a37-b9), are now further specified. First the definiens (101b38-102a17)<sup>18</sup> is defined as a phrase indicating something's quiddity (λόγος ὁ τὸ τί ἦν εἶναι σημαίνων). It is rendered, in answering to the problem presented to us, either as a phrase instead of a name or as a phrase replacing another phrase. Clearly people whose rendering consists of a name only, in whatever way, do not thereby render the definiens of the thing in question as it is conceived of (πράγματος) — because a definiens is a phrase, not a single name. For the rest, there are 'definiens-like' manners of expression, such as those bringing up (essential) sameness and difference between things, e.g. the question asked concerning the dictum,<sup>19</sup> e.g. 'that what is befitting is what is beautiful'. Such expressions have much to do with defining things, since when we can argue in our dispute (διαλέγεσθαι) that two things are the same or are different, we shall be well supplied by the same turn of argument with a means to attack the definientia brought forward by the adversary as well; for by showing that a definiens does not hold of the thing under discussion, we have *eo ipso* overthrown it.

As was already pointed out earlier, we should explain the use of the 'predicables' primarily not apophantically, i.e. in terms of

<sup>17</sup> Except for existential assertions having only a substrate term, as 'This man (or Socrates) exists'.

<sup>18</sup> It cannot be overstressed that Aristotle speaks of a thing's definiens (being a phrase), not its definition, which is a sentence. Once again, dictums (whether complete or incomplete) are at the focus of interest, not statements (assertions) as such.

<sup>19</sup> Notice that Aristotle's examples (102a6-7) are, as often, *that*-clauses, not statements.

possible sentence predicates, but onomastically, i.e. in terms of naming the substrate alternatively for the use of a certain argument. On this interpretation, the difficulties raised by Smith (91f.) on account of ‘counterpredication’ (where this label is meant in terms of sentence predication) are altogether beside the point. What is brought up by Smith as counterpredication should be taken in terms of substitution (Aristotle’s *μετάληψις*). This is to say, if his being mortal is under demonstration you can designate this man, Socrates, as ‘this living body’ to obtain the appropriate middle (*τὸ μέσον*) to make your point. But although ‘living body’ is in the present case a correct stand-in for ‘human being’, nothing will allow us to say that, speaking generally, ‘man’ and ‘living body’ are counterpredicating predicates, having a symmetrical relationship and are thus (formally) convertible. The validity of the proof only means that referentially (or extensionally), i.e. in the present case, the designations are coextensive.

A proprium (*ἴδιον*) or specific property is that mode of being which, although not indicating a substrate’s quiddity, nevertheless falls to it alone, and, accordingly, is said convertibly of it. So it is a proprium of man to be capable of learning grammar: for if he is man he is capable of learning grammar, and the other way round, while being asleep is not a proprium of his (102a18-30).

A genus (*γένος*) is the mode of being that is said of a number of things showing specific differences in the quidditative line (*ἐν τῷ τί ἐστι*). So let us say that such modes of being are said quidditatively which are appropriate to replying to the question ‘what is the object before you?’, as, for instance, ‘that he is an animal’ is properly answered to such a question concerning a man. The question whether some mode of being is in the same genus as another or in a different one is also ‘generic’, i.e. falls under the same kind of inquiry as the genus itself. For having stated in our debate that animal is the genus of man and of ox as well, we have thereby argued that they are in the same genus, while if it turns out to be the genus of one and not of the other we have *eo ipso* argued that they do not share the same genus (102a31-b3).<sup>20</sup>

Finally, a twofold definition is presented (102b4-14) of what an accident (*συμβεβηκός*) or a coincidental mode of being is. First,

<sup>20</sup> The logical sense of *γένος* intended here, as well as the notion of ‘being generically the same’ or ‘generically different’ are treated in the Lexicon, *Met.* Δ 28, 1024a36-b16.

extensionally, by saying that any mode of being belonging to a thing (πράγματι) other than the three foregoing ones is coincidental; then, the intensional and better one is given by claiming that it is a mode of being which can belong or not belong to any one and the same thing, as is e.g. the case with 'to be seated' or 'to be pale'. Questions concerning comparisons of such modes of being are included, such as 'whether the honourable or the expedient is preferable'. Nothing prevents a thing's coincidental mode of being from being a proprium temporarily or with reference to other things, e.g. when a man is in fact the only person seated, or his being seated is considered in relation to any persons who are not seated. However, a coincidental mode of being will never be a proprium in an unqualified sense (ἀπλῶς).

Thus by listing the four paradigms of assignment (or designation) that can be discerned in names taken from the ten categories, Aristotle has in a way laid the basis for Porphyry's doctrine of what, in the Latin tradition, many centuries after Porphyry (and Boethius), was labelled the 'predicables', whereby the lowest (infima) species is taken to be the fifth predicabile (εἶδος). In Aristotle's account in the *Topics*, however, the infima species does not feature as a separate item. In his view of the role of the four items, the infima species (e.g. man), as enmattered in a substrate, is the starting-point of any dialectical argument, and the common name signifying it is used to initially — prior to the dialectical proof proper, that is — designate the particular under examination, viz. the thing put before the respondens (τὸ προκειμένον), say, Socrates or Callias. To Aristotle, reasoning does not begin until this particular is called up under an alternative designation, corresponding to a different mode of being thereof, such as 'animal', 'rational animal', 'capable of learning grammar', or 'pale <thing>'.

For that matter, I cannot understand Ross's (1948, 57) accusing Porphyry for having hopelessly muddled Aristotle's classification of the 'predicables' "by reckoning the species as a fifth predicabile". Ross's manner of expression is somewhat negligent, in the first place, since what Porphyry did is only to replace the (individual's) definiens with the lowest species. As for Ross's accusation itself, why should the lowest (infima) species not be entitled to have its own distinct place in the scheme of inferences, no less indeed than the higher species, which go under the label 'genera', such as 'animal', 'vivum', 'body'? Furthermore, Porphyry's adoption of the infima species into the list

seems to be fully in keeping with Aristotle's basic view that "the materials from which the arguments start are equal in number, and are identical, with the subjects on which reasonings take place" (101b13-15), these subjects being, as it happens, designated by Porphyry's 'fifth predicable', the infima species. The unfortunate Porphyrian interference is of a quite different nature, as will be seen later (my section 5.24).

It is worth noting that there is one important feature with regard to which Porphyry, unlike modern commentators, quite appropriately assesses his five 'predicables'. Right in the opening lines of the *Isagoge* we are told that the treatise's use not only concerns Aristotle's doctrine of *Cat.*, but also the assignment of definientia, and generally speaking, the procedures of division and epistemonik proof:

*Isag.* 1<sup>1-4</sup>: Since it is necessary, Chrysaor, to know what genus is, what differentia, what species, what proprium, and what accident (τί γένος καὶ τί διαφορὰ τί τε εἶδος καὶ τί ἴδιον καὶ τί συμβεβηκός), both for the doctrine of the categories found in Aristotle and for the assignment of definientia (τὴν τῶν ὁρισμῶν ἀπόδοσιν), and in general for what is under discussion in matters of division and demonstration (τὰ περὶ διαίρέσεως καὶ ἀποδείξεως), I shall try briefly to address ....

Porphyry seems to have had at least some idea about the special position of the procedure of defining, which is involved in correctly assigning the five modes of being (expressed by a thing's genus, differentia, species, proprium, or accident), in order to bring it up according to precisely that mode of being on which (being a 'middle') an epistemonik proof depends. This is the more remarkable as Porphyry took the liberty to replace Aristotle's item ὅρος with εἶδος (being a thing's complete definiens), as a result of which ὅρος-εἶδος came to be on a par with his other four items. Thus Aristotle's definiens obtained an ambivalent position: on the one hand it was going to act as εἶδος ('species'); on the other it maintained its over-all position.

In the commentary tradition the role of the 'predicables' has been primarily understood in terms of statement-making. This means that the definiens too occurs as a sentence predicate, saying e.g. 'Socrates is a man' ('species'), or 'an animal' ('genus'), or 'a rational being' ('differentia'), or 'capable of laughing' ('proprium'), or 'pale-complexioned' ('accidens'). Thus it cannot come as a surprise that 'definition' ('definiens'), being concerned with a thing's quidditative components, was going to be escorted by the more liberal notion,

‘description’ (‘describens’) which also could be used with regard to the non-quidditative modes of being. At the same time, the fact that the familiarity with the ‘predicables’ is useful (even indispensable in Porphyry’s view) for the assignment of definitions was explained in terms of the *framing* of definitions: to correctly frame a thing’s definition (read: the definitorial formula of its εἶδος) you have to know its genus and differentia, and not be led astray by focussing on one of its non-quidditative properties.

In chapter 6 (102b27-103a5), the reader is cautioned that, eventually, also the inquiry concerning a thing’s genus or proprium or accidens bears on finding or checking its definiens. But we must not for this reason, Aristotle warns us, seek a single method of inquiry applicable to all four items alike. To put it briefly, the four each require their own treatment, but this should not prevent us from fitting mixed questions each into the particular branch which is most appropriate to it, speaking of them as ‘definitorial’ or ‘generic’ questions, in the way explained above.<sup>21</sup>

Chapter 7 is about the various uses of the term ‘sameness’. Sameness falls, roughly speaking, into three divisions, meaning that the term is applied to what is either numerically, or specifically, or generically the same. Numerically, in cases in which there is more than one name but only one thing (πρᾶγμα), e.g. ‘mantle’ and ‘cloak’, when used for one and the same garment; specifically, where there is more than one thing, but they do not differ in species, e.g. two men or two horses; and the same holds, *mutatis mutandis*, for ‘generically’ (103a6-14).<sup>22</sup>

Smith (1997, 68) is of the opinion that the phrase ‘first of all’ (πρῶτον δὲ πάντων) found in the opening sentence of this chapter is puzzling (“First of all, we must determine the number of ways in which ‘the same’ is used”). But any puzzlement will disappear if we are aware that with reference to the *onomastic* ‘stand-in’ function of the diverse designations actual semantic sameness is the pivotal issue. What is important in our use of diverse designations (generic, or specific, or coincidental etc.) is that there is numerical or extensional

<sup>21</sup> Ch. 5, 102a5-11 and a36-b3. The phrase καθάπερ εἴρηται πρότερον (7, 103a2) is not just ‘as was said before’ (as it is commonly taken to mean), but ‘in the way explained above’; likewise at 8, 103b1; III 4, 119a2; 6, 120a35. Cf. *Phys.* I 7, 190a14: ὥσπερ λέγομεν = ‘in the way we suggest’. See my *Index* s.v. λέγειν.

<sup>22</sup> There is a special question (103a14-24) about the specific sameness of water from the same spring.

sameness between the denotations of the diverse terms used to bring up the object under examination.

Small wonder that Aristotle goes on to discuss numerical sameness in the semantic context of denotation. Quite understandably in this section this issue is investigated along the lines of using designations falling under different types of assignment (generic, definitorial etc.). Any particular can be brought up ('denoted') alternatively by using an alternative name, or its definiens or its property or one of its coincidental modes of being:

*Ibid.* 7, 103a23-31: The term 'the same' seems to be applied with the most general acceptance of everyone to that which is numerically one. But even this is customarily employed in more than one sense. Its principal and primary sense is found when one and the same thing is brought up by another name or by its definiens, e.g. when 'being a cloak' is given as the same as 'being a mantle' or 'being a two-footed land animal' as the same as 'man'. A second sense occurs when the sameness concerns the proprium, e.g. when 'capable of acquiring knowledge' is brought up as the same as 'man' or 'that which is naturally carried upwards' is given as the same as 'fire'. A third sense occurs when the sameness comes from a coincidental mode of being, as when 'that which is seated' or 'that which is educated' is brought up as the same as 'Socrates'. For all these senses aim at indicating what is numerically one (τὸ ἐν ἀριθμῷ βούλεται σημαίνειν).<sup>23</sup>

Aristotle (103a31-39) proceeds to explain that a thing's numerical oneness (sameness) is not threatened by our habit of designating one and the same particular by other designations than just its essential name. He speaks (103a32-33) of this procedure as 'to substitute one manner of appellation for another' (μεταβάλλειν τὰς προσηγορίας) and illustrates its use from daily practice. Often when we order someone to summon one of several seated persons, designating him by name, we change our designation when the person we are giving the order does not happen to understand, since he will, we think,<sup>24</sup> understand better if we indicate the person to be summoned by a

<sup>23</sup> In the Lexicon, numerical sameness is dealt with (*Mel.* Δ 9, 1017b27-1018a4) as coincidental (κατὰ συμβεβηκός) sameness, to which essential (καθ' αὐτό) oneness is roughly opposed (1018a4-9). By the way, what is (quite convincingly) commented upon 103a21-31 by Smith (1997, 70f.) can only be understood in terms of naming ('onomastically'), not predicating ('apophantically'). The same thing holds of his use (72-4) of 'predicate' in the sense of 'name' or 'designation', and 'definition' in the sense of 'definiens'.

<sup>24</sup> Notice the ὥς *plus* participle construction indicating the speaker's subjective conviction; Kühner-Gerth II, 91.



name deriving from one of his coincidental modes of being. So we tell him to summon 'the man who is seated' or 'the man who is conversing', apparently convinced that we are indicating the same entity by its name and by its accident.<sup>25</sup> By the way, Aristotle's illustration most clearly shows that he has naming, not statement-making, in mind; in point of fact, he exemplifies what he means to say by using names ('the sitting one', 'the talking one'; τὸν καθήμενον, τὸν διαλεγόμενον), not statements.

In the subsequent lines (ch. 8, 103b1-19), the author goes on to prove that it is the aforesaid ways of approaching a thing's diverse modes of being that dialectical arguments start from, proceed through, and lead up to. A first way of confirming this is by induction (πίστις διὰ τῆς ἐπαγωγῆς). Take every problem and proposition you like, one by one: each and every one will turn out to have been formed either from a thing's definiens (ὅρος) or from its proprium or from its genus or from its accident.

Another way to confirm this, Aristotle claims, is through reasoning (πίστις διὰ συλλογισμοῦ). Necessarily, anything that is applied to something<sup>26</sup> to indicate it alternatively must either be or not be convertible with the initial designation of the thing (τοῦ πράγματος). If it is convertible (ἀντικατηγορούμενον), we are dealing with its definiens or proprium. (If it indicates its essence, it is its definiens, if not, it is the proprium). If on the other hand, it is not applied convertibly it either is, or is not, something occurring in the substrate's (τοῦ ὑποκειμένου) definiens; now, if so, it must be either the genus or the differentia, since the definiens (ὀρισμός) is composed of genus and differentia.<sup>27</sup> If, however, the mode of being is not one of the components of the definiens, clearly it must be a coincidental one; for the latter is, as we saw, that which, while it belongs to the thing (πράγματι), is neither its definiens nor its genus nor its proprium.

<sup>25</sup> See my section 4.25 on metalepsis. The modern reader will undoubtedly be reminded of a contemporaneous parallel. Donnellan (1977), 42f; cf. our note 97 below. As for Ancient thought, this is precisely the problem of Plato's *Sophist* 251B-C; see De Rijk (1986), 115-25; Aristotle, *Met.* Δ 29, 1024b26-36.

<sup>26</sup> The Greek has (103b7-8) πᾶν τι περὶ τινος κατηγορούμενον. The περὶ τινος formula always bears on a subject taken as the substrate of certain attributes said of it. See my Index s.v. περὶ.

<sup>27</sup> Obviously, Aristotle has the division of the genus into the two opposite definientia of a lower genus (species) in mind.

5.22 *How the categories and the 'four items' are integrated*

The purport of the ninth chapter is to elaborate what was observed earlier (4, 101b11-15 and 8, 103b2-3) about harmoniously fitting together the categories and the four paradigms: genus, definiens, proprium, and accidens. To have a proper view of this harmonious co-ordination is pivotal for properly procuring arguments *pro* and *con* in any disputation on whatever problem is brought up (1, 100a19-21). The four items find their logical places in the scheme of categories (the ten different kinds of appellation or designation):

*Topics* I 9, 103b20-29: Next, then, we must determine the kinds of the <ten> designations (τὰ γένη τῶν κατηγοριῶν) in which the four aforesaid different types <of designation> (αἱ ῥηθεῖσαι τέτταρες διαφοραί) occur. They are ten in number: quiddity (τί ἐστὶ), quantitative being, qualitative being, relational being, being in a certain place or time, 'having', and being active or passive, since coincidental being, and generic being, as well as the mode of being corresponding to a thing's proprium or definiens, will always be in one of these categorial designations. For all propositions made by means of those four (διὰ τούτων) indicate (σημαίνουσιν) a thing's quiddity or quality or quantity or one of the other categories. Hence it is plain<sup>28</sup> that he who indicates something's essence indicates sometimes its subsistent mode of being (οὐσίαν), sometimes its qualitative being, while at some other times one of the remaining kinds of categorial being (κατηγοριῶν).

There is a textual difficulty in the opening sentence that needs to be solved. Aristotle opposes the types of the categories to "the aforesaid four", as the text is commonly read, omitting the reading διαφοραί found in some of our manuscripts. Following the common reading, Frede asks "the four aforesaid what?" He thinks (1987, 32) it is clear from the grammar of the Greek sentence that again κατηγορίαι should be understood, and the full sentence should run as follows: "Next we must determine the genera of the κατηγορίαι in which one will find the four above mentioned κατηγορίαι". The logical balance of the full sentence, I take it, requires us instead to contrast 'the aforesaid four' with precisely the *types* of the categories, and to understand the enigmatic "aforesaid four" as bearing on an alternative

<sup>28</sup> See also 102a32-37. By the way, there is no good reason for taking (with Smith 1997, 180) the phrase ὁ τὸ τί ἐστὶ σημαίων at 103b27-28 not to mean 'he who etc.', and to understand 'the λόγος which' — because of the lines b30ff., where *pace* Smith there is clearly talk of a person who is saying something, and since σημαίνειν can also be said of persons, e.g. at *PA* II 3, 649b22; *EN* VI 7, 1141a12; Liddell & Scott s.v.

arrangement of the κατηγορίαι, a different one, that is, from the well-known scheme of the ten categories, indicated here as the “ten in number” (τὸν ἀριθμὸν δέκα). This should invite us to take the reading διαφοραί into serious consideration, and to determine the difference between the ten types of designation (‘categories’) and the four paradigms of assignment.

The reading διαφοραί is found in the Parisinus 1843 (13th cent.) and the Basiliensis 54 (12th cent.), and in the 5th century Greek exemplar used by Boethius as well, who has “in quibus sunt dictae quattuor differentiae”. I think there are good reasons to follow (with Theodor Waitz in his edition of the *Organon*) these manuscripts. The next question is how to render διαφοραί, sc. τῶν κατηγοριῶν. For obvious reasons διαφορά should not be taken in the sense of the differentia to be ranged with the genus (101b18-19). But rather this word has its usual sense ‘difference’, in which it is also used to concretely stand for ‘kind’ or ‘type’. So when in *Mundo* 4, Aristotle is speaking of two kinds of exhalation which rise continually from the earth into the air above us, he claims (394a17) that from the dry exhalation come the winds and the different kinds of breezes (ἄνεμοί τε καὶ πνευμάτων διαφοραί). *Pol.* presents two more occurrences of διαφορά in this sense. At III 14, 1284b37-1285a1, it is said that when we consider the rule of a king, we must first determine whether there is one type (γένος) of royalty, or whether it has a number of sub-types (διαφοράς). At IV 4, 1291b28-30, we read: “the notables again may be divided according to wealth, birth, virtue, education, and what is said according to the same way of differentiating as is found in the foregoing criteria (κατὰ τὴν αὐτὴν διαφοράν)”.

On this understanding of the word διαφορά, the opening sentence of *Top.* I 9 contrasts the ten vertical columns of categorial being with the different types (διαφοραί)<sup>29</sup> of assignment (‘predication’) based upon the horizontal generic and specific levels found in each column, which together make up the totality of inferential relationships between the various designations by which the object of the dialectical disputation (τὸ προκείμενον) may be brought up. By *contrasting* the different types of assignment with the categorizations on

<sup>29</sup> There is no reason at all to be bothered by Aristotle’s use of the word διαφορά in this sense in the very context of the four items, in which it has the technical sense, ‘differentia’. We find the terms γένος and εἶδος likewise used in their non-technical senses ‘type’ or ‘kind’, alongside their technical senses. E.g. *Met.* Γ 2, 1003b16-22; Z 8, 1034a1; 12, 1037b31; K 1, 1059b27; I 4, 1055b27. For similar uses of εἶδος in a non-technical sense in Plato, De Rijk (1986), 32f.

their own, Aristotle may have perceived something of the modern difference between first-order and second-order terms.<sup>30</sup>

The intended co-ordination is clarified by some examples (103b29-39), but, not for the first time, Aristotle's manner of speaking is "dangerously elliptical".<sup>31</sup> His intention is easily retrievable, though, if only we press some linguistic hints in the text. First, there is a remarkable use of the participle ἐκκείμενον instead of the usual προκείμενον ('the thing set before us'). Apart from the context of syllogistic ἐκθεσις and some other technical uses, the verb can also generally mean 'to isolate in thought', 'to extrapolate' (*SE* 22, 179a3) and 'to pick out for separate examination' (*Phys.* VI 4, 235a28). In the present context, Aristotle has in mind the singling out of one special mode of being falling to a substrate, while leaving aside all the others for the time being. Thus taking his first example, when asked about an individual thing, say, Socrates, 'what-it-is' (τί ἐστὶ), the respondents will answer 'a man' or 'an animal', if he focusses on what this entity taken as a substrate *is*; if he picks out one of this entity's modes of qualitative being, like its being pale, the 'what-it-is' question is answered by using the matching notion 'paleness' or 'quality'; and so on for the other categorial modes.

In his concluding remark following the exemplification (103b35-39), Aristotle uses the preposition περί<sup>32</sup> to indicate the object about which one is saying something. In such cases, the περί formula tends to indicate the whole of an object, while contrasting it to one of its special aspects. Besides, the pronoun αὐτό is likewise used to stand for the 'very-self' of something, leaving aside any qualifications.<sup>33</sup> The use of ἕτερον, on the other hand, precisely points to a thing's otherness, which consists in its coincidental modes that are being focussed on. Putting it briefly, the αὐτό formula indicates that the assignment of an attribute does not exceed the categorial borderlines, while ἕτερον bears on something categorially different.<sup>34</sup>

<sup>30</sup> Smith is on the right track with one of the interpretations he proposes (1997, 74.): "First, different types of predicate may be related to the subjects of which they are predicated in different ways". One merely needs to remove the (seemingly) apophantic context by replacing 'predicate' with 'designation' and 'subject' with 'substrate'.

<sup>31</sup> The qualification is Ackrill's (1963, 149); cf. Weidemann (1994), 415.

<sup>32</sup> At *Met.* Γ 4, 1006b13-28, a similar use is made of the preposition κατά.

<sup>33</sup> Cf. *Met.* α 1, 993b24.

<sup>34</sup> Also e.g. *Met.* Γ 4, 1007a33-b6. The 'to belong to something different' issue is quite current in the *Physics*.

Turning now to Aristotle's exemplification concerning the four items (103b29-35): whenever (1) with reference to (περί) a person 'that-he-precisely-is-a-man' or 'that-he-precisely-is-an-animal' is said, or (2) to (περί) some white thing 'that-it-precisely-is-whiteness' or 'colour(edness)', or (3) to (περί) something which is a cubit long 'that-it-precisely-is-cubit-length' or 'that-it-precisely-is-magnitude' — in all such cases the 'what-it-precisely-is' (τί ἐστὶ or ὅπερ τί ἐστὶ) is at the focus of the respondent's attention, no matter which one of the ten categories is involved. But whenever he directs his attention not to the substrate's 'very-itself' (αὐτό) but its otherness, viz. something coincidentally falling to it, the respondent will come to speak not of the substrate's 'what-it-precisely-is', but the essence of one of its coincidental categorial modes of being.<sup>35</sup>

This interpretation leads us to render the difficult passage thus:

*Ibid.* 9, 103b29-39: When a human being is put before<sup>36</sup> <the respondent>, and he identifies<sup>37</sup> that what is put before him as 'human being' or 'animal', he states a quiddity ('what-it-is'), while signifying subsistent being (οὐσίαν). But when a pale colour is singled out, and he identifies what is singled out as 'paleness' or 'colour', he states a quiddity, while signifying qualitative being. Likewise, also, when something of a cubit long<sup>38</sup> is singled out, and he identifies what is singled out as 'cubit length' or<sup>39</sup> 'magnitude', he will state a quiddity, while signifying quantitative being. Similarly with the remaining categorial modes of being. For as to each of these modes it holds good that, both if, with reference to (περί) it, it is brought up according to its own quiddity [lit. 'its proper self' (αὐτὸ περὶ αὐτοῦ)], as well as if its genus is said about it (περὶ τούτου), one states a quiddity. — If, on the other hand, <with reference to it> something categorially different<sup>40</sup> <is brought about>, one does not state its proper quiddity, but a quantitative or qualitative mode of being or one of the remaining categorial modes of being (κατηγοριῶν).

<sup>35</sup> At *Mel.* Γ 2, 1004b5-17, Aristotle claims that to examine the quiddities of the non-substantial modes of being is also of concern to the metaphysician.

<sup>36</sup> In the first example, one would expect the usual προκειμένου, rather than ἐκκειμένου found here. Of course, this being put before the respondens means that a certain object is singled out for consideration, but it need not be physically demonstrated.

<sup>37</sup> The Greek has 'he says that [...] is'. The process of defining or quidditatively identifying something will be discussed in my sections 6.55-6.57.

<sup>38</sup> Omitting with Alexander (CAG II 2 *ad. loc.*) μεγέθους at 103b33.

<sup>39</sup> The balance of the argument requires supplying (with Prantl) ἢ before μέγεθος at 103b34.

<sup>40</sup> I.e. what is different from the subsistent modes of being expressed by the specific or generic quiddity falling under the first category ('substance' or 'subsistence').

The purport of this passage is now understandable. To Aristotle's mind, each and every disputation is about concrete things.<sup>41</sup> The object of dialectical proofs too (τὸ προκείμενον) is concrete, subsistent being ('substrate'), which is primarily informed by its specific *eidos*, and is also endowed with all kinds of coincidental modes of being. The object can be called up for discussion by designating it according to any of these modes, on the understanding, that is, that both the subsistent or substantial mode of being, and the non-substantial ones as well, may be differentiated into their respective generic levels: e.g. Socrates's specific mode of being, 'man', can be reduced to its generic element, 'being an animal', just as his specific 'being pale' to its generic ingredient, 'being coloured', and so on for all modes of categorial being.

There are two main options, then. 'Pale Socrates' is *either* addressed according to his very 'this-ness' (αὐτό), to wit his 'manhood' (specific mode of being) or 'animalhood' (generic mode of being), i.e. *his* individual being a man or an animal, *or* according to his being pale or being coloured, which is something different from its proper being (ἕτερον). Now the second option is itself open to two different approaches to the object, pale Socrates, since, as it happens, his being pale (or the paleness enmattered in Socrates) is addressed in a twofold way. The paleness is considered *either* as enmattered in this individual, Socrates, and so is not taken αὐτό, i.e. in its own 'what-it-is' (τί ἐστι), but in its being ἕτερον, namely the substance's inessential, qualitative mode (ποιόν),<sup>42</sup> *or* it is taken by itself (αὐτό) i.e. regardless of its being enmattered in Socrates, and so after its own specific or generic quiddity, paleness, or colouredness, and so on.<sup>43</sup> All options then may serve the procedure of dialectical proof, each in their own way, that is to say, making use of the various relationships existing in the co-ordinate scheme of each of the ten categories, including the ladders formed by the genus and species levels.<sup>44</sup>

<sup>41</sup> For the golden rule of 'this-ness' see Guthrie V, 103: 'Primacy of the particular'.

<sup>42</sup> *Top.* I 9, 103b37-39.

<sup>43</sup> I.e. the genera superior to the genus colouredness. Note that here the semantic Rule, RMA is applied; my section I.71.

<sup>44</sup> The τί ἐστι question is frequently applied in the case of coincidental modes of being. E.g. *Top.* III 1, 116a23-28; IV 2, 122a21-30; 6, 128a30-37; V-VII *passim*. Accordingly, throughout *Top.* the τί ἐστι question will be applied to items from non-substantial categories. E.g. IV 2, 122a1-30; b18-37; 3, 123a33-37; 6, 127b26-37; 128a20b9. Woods's failure to see this (1991, 42) has *inter alia* led him to believe in

This being so, Aristotle can, by referring back to chapter 4, 101b11-25, repeat (103b39-104a1) that such, and so many in number, are the objects about which (περὶ ὧν) and from which (ἐξ ὧν) the arguments are framed. To all intents and purposes *Top.* I, 10-18, and indeed the lion's share of Books II-VII, are intended to make clear "how we are to acquire them, and by what means we will become well supplied with them" (104a1-2).

Before embarking upon these chapters let us discuss Aristotle's use of τί ἐστὶ and οὐσία, and the origin of the later key term, 'predicable'. These are two pivotal notions in Aristotle's work, the significance of which is easily obscured by the use of the *un*Aristotelian label 'predicable'.

### 5. 23 *The notions τί ἐστὶ and οὐσία*

Frede extensively discusses<sup>45</sup> the question whether the τί ἐστὶ phrase used for the first category in *Top.* I 9 should be considered just a variant of the term οὐσία found in *Cat.*, both of them meaning 'substance'. Contrary to the traditional view (going back to Alexander of Aphrodisias, CAG II-2, p. 65<sup>17-19</sup>), which takes the τί ἐστὶ formula to refer to substance, Frede argues that it should not be restricted to substances. This position leads him to include in the first item of the *Top.* I 9 list not just substances, but qualities, quantities, and all the other kinds of entities as well. He adduces (36f.) five clear arguments in support of his view, and is of the opinion that the traditional view has to assume (1) that the phrase 'what-it-is' is used in two different ways in *Top.* I 9, in one way in the list of categories presented in the opening lines and in a different way throughout the remainder of the chapter, and (2) that Aristotle presupposes that readers are well aware that the phrase is used ambiguously.

Frede's position relies on his opposing 'what-it-is' and 'substance' and taking the ambivalence of 'what-it-is' (as well as οὐσία as used in the later works, particularly *Met.*) as a mere ambiguity consisting in its being used both for 'what-it-is-ness' ('being-ness') and 'substance'.

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'universal forms' in Aristotle. — Again, Smith's comments on the present passage are seriously obscured by his taking it in terms of sentence predication instead of naming and designation. Similarly τόδε τι is used for non-subsistent beings at *Met.* Δ 7, 1017a22-27 and Z 4, 1030a17-27.

<sup>45</sup> Frede (1981) = (1987), 36-46. Also Malcolm (1980/81), 668ff.; Ebert (1985), 127ff.

This remarkable conflation, he argues, can only be explained in terms of a radical doctrinal development in Aristotle's thought about ousia. Frede is certainly right that in *Top.* I 9 (and elsewhere in this book, for that matter) the several κατηγορίαι ('modes of appellating or bringing up things') all concern a thing's beingness, inasmuch as the thing is either brought up according to what it is by itself (its subsistence) or according to a mode of being coincidental to this primary mode, such as its qualitative, quantitative, or relational etc. mode of being. In point of fact, all these modes answer to the τί ἐστι question, but the first one alone answers it in its primary sense.

Thus the unqualified τί in τί ἐστι primarily bears on a thing's subsistence or substantiality, and secondarily refers to it as a substance or hypokeimenon. Putting it differently, the list of *Top.* I 9 is about ten formal or intensional ways of bringing up a thing according to the different modes of being it possesses which all indicate a certain τί ἐστι, the first in the unqualified sense, the others in a qualified sense. On the other hand, from the material or extensional or referential point of view, only the first designates things in their capacity of being subsistent, while the others designate these substances as somehow modified. Therefore the proper issue of *Top.* I 9 is that the ten items all refer to substances, the first one both formally and referentially, the others only referentially, rather indeed than the (admittedly unmistakable) fact that, *pace* the traditional view, the τί ἐστι phrase is not restricted to substance and covers the nine coincidental modes of being as well.

All this is in perfect keeping with Aristotle's basic ontology. While it incorporates not just objects like trees and lions, but also qualities like colours, and quantities like sizes, and all the kinds of items one can distinguish according to the doctrine of the κατηγορίαι, this does not entail that objects, qualities, quantities, and the rest should exist side by side, as separate domains of being. On the contrary, Aristotle claims that qualities, quantities, and the rest exist *only as* qualities, quantities, and so on, *of substances*, and that there are qualities, quantities etc. only in so far as there are substances thus modified.<sup>46</sup> Once again, one should not, with regard to Aristotle's use of technical terms, mistake ambivalence for mere ambiguity, nor judge Aristotle's use of the 'both-and' device as an escape from our modern rigid 'either-or' requirement.

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<sup>46</sup> Cf. Frede (1987), 72.



In his commentary on *Met.*, Alexander (CAG I, p. 473<sup>3-7</sup>) explicitly points out that Aristotle himself (*Met.* Z 4, 1030a17-27) tells us that the phrase 'what-it-is' is ambivalent and that in its primary use it applies only to substance, while in its secondary senses it may refer to one of the other categorial modes of being. Frede (37) tries to eliminate these testimonies by forwarding his own view of the doctrinal differences between *Top.* and *Met.*, arguing that at the time when he wrote the *Topics* Aristotle did not yet seem to have developed the ontology of *Met.*, and hence, when writing *Top.*, he could hardly expect the reader to have a point in mind (viz. the ambivalent use of the phrase 'what-it-is') which he himself had not yet made. This is begging the question, it would seem. Besides, assuming for the sake of argument that Frede's thesis about the doctrinal differences between *Top.* and *Met.* is correct, we have to explain why Aristotle should warn the readers of *Met.* that the phrase 'what-it-is' is used differently from the way in which it occurs in *Top.* I 9, though at *Met.* 1030a17-27 he is in effect using a manner of expression which is quite similar to what he tells us in *Top.* I 9, when taken in Frede's interpretation.

All things considered, we had better assume that the terms οὐσία and τὸ τί ἔστι (τὸ τί ἦν εἶναι) are used ambivalently, with one and the same focal meaning of 'beingness', which to us moderns may differentiate into 'substance' and 'essence'.<sup>47</sup> This is not to say that there was no doctrinal development on this score in the form of making things more explicit. What is rejected is any idea of a radical novelty or mutually opposing doctrinal views.

### 5. 24 *The origin of the misleading label 'predicable'*

The use of the label 'predicables' for the Aristotelian set of what I have called earlier the four "paradigms of assignment", genus, definiens, proprium, and accidens is anachronistic.<sup>48</sup> To my knowledge,

<sup>47</sup> Significantly, the Greek notion of οὐσία is throughout the centuries indiscriminately rendered both 'essentia' and 'substantia'. In twelfth-century works on logic as well as on theology, 'essentia' is used to stand indiscriminately for 'substance' taken as an instance of a certain essence and essence qua enmattered in a particular; De Rijk (1981), 19-24; 29-35; also in (1989), VI. Cf. Celluprica (1987), 175. In the final analysis, it is the semantic rule RMA that is applied time and again.

<sup>48</sup> As is commonly ignored, e.g. in the *Glossary of Logical Terms* in Paul Edwards, *The Encyclopedia of Philosophy*, vol. V, col. 71b: "Predicables. A classification of things and concepts as predicated of subjects, first made by Aristotle. His four predicables were definition, genus (in which he included differentia), proprium, and accident.

the expression ‘predicable’, taken as a substantivated noun with a specific meaning, did not occur until the end of the twelfth century — in some Parisian schools.

Its supposed Greek counterpart, κατηγορούμενον occurs in Porphyry, e.g. where he (after Aristotle, *Top.* I 5, 102a31-32) defines the genus: τὸ κατὰ πλειόνων καὶ διαφερόντων τῷ εἶδει ἐν τῷ τί ἐστι κατηγορούμενον, where the participle is correctly rendered by Boethius using a relative clause: “quod de pluribus et differentibus specie in eo quod quid sit praedicatur”.<sup>49</sup> It is noticeable that neither Porphyry nor Boethius use a special term to indicate the proper nature of the five items, genus, species etc. As a matter of fact, the later collective term πέντε φωναί (which became in Latin: ‘quinque voces’) dates back to as late as c. 500 A.D, as we will see in the next section.

This much seems to be certain: as a Neoplatonist, Porphyry mainly focussed upon the ontological impact of the genus, species etc. cluster. So he was not so much interested in the second-order distinction between the five items, including their inferential relationships (as is the case with Aristotle’s four items) as in the ontological status of what is signified by the first order genus terms (like ‘animal’), species terms (like ‘man’), and so on (like ‘rational’, ‘being capable of learning grammar’ or ‘being pale’). Thus Porphyry launched the famous and everlasting problem of universals, but confined himself to giving a set of unanswered questions, thus skirting the problem as one too difficult for the beginners the *Isagoge* was meant for.<sup>50</sup>

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Medieval logicians, following Porphyry, offered a list of five predicables — species, differentia, genus, proprium, and accident — which was adopted by most traditional logicians”. The many inaccuracies of this lemma will be remedied in this section. — Ebert (1985, 124, n. 24) rightly observes that neither Aristotle nor his Greek commentators used a technical term to indicate the notion covering what from the Scholastic thinkers onwards is called ‘predicable’.

<sup>49</sup> Porphyry CAG IV-1, p. 2<sup>16-17</sup>; *Isagoge Porphyrii*, translatio Boethii, p. 7<sup>1-2</sup>. The adjective ‘praedicabilis’ is nowhere found in this translation used by Boethius, nor in his other translations, e.g. *Cat.* 3, 1b11 and 23; 5, 2b31; 3b4; *Int.* 7, 17b13, 14; 11, 21a7. In his translation of *Top.*, Boethius has ‘praedicatum’ (e.g. V 4, 132b22), while in *SE* 22, 179a8 the paraphrase ‘quod praedicatur’ is read. By the way, the 12th. century translator of *APo.*, James of Venice (c. 1128) most of the time has ‘predicans’, never ‘predicabilis’, e.g. I 4, 73b17; 6, 74b9; 20, 82a24.

<sup>50</sup> CAG IV-1, p. 1<sup>9-14</sup>: “At present I shall decline to say of genera and species (1) whether they subsist or whether they are placed in the bare conceptions alone or (2) whether subsisting they are corporeal or incorporeal, and (3) whether they are separated from perceptibles or placed in perceptibles and in accordance with them. Questions of this sort are a most high-minded matter and require more than usual scrutiny”.

In fact, Porphyry's *Isagoge* is about what it says it is about, the five items that are essential to the understanding of Aristotle's *Categories*.<sup>51</sup> The treatise was meant by Porphyry to teach young students about the proper nature of the 'things' ordered in the ten categorial columns, by elucidating their being built up by mutually co-ordinate levels, which correspond to as many ontic ingredients of the things of the outside world. In considering the Aristotelian categories as primarily a classification of beings, the merely inferential relationships implied in Aristotle's four second-order types of designation as envisaged in *Top.* I, chs. 4-6 and 9, quite naturally came to be regarded as representative of ontic articulations of really existing things, this at the cost of their logico-semantic relationships. From then on Porphyry's threefold question about the status of these (putative) generic, specific etc. 'things' became inescapable. And apparently Porphyry considered his own Neoplatonic answers to the intricate questions too difficult a subject to be dealt with in an introductory work. All this testifies to Porphyry's mistaking Aristotle's four second-order designation types for first-order predicates. But, all the same, the five items were still not taken as what, many centuries later, were labelled 'predicables'.

Peter Abelard (1079-1142), who usually has the Boethian paraphrase ('quod praedicatur'), once replaces it with the adjective 'predicabilis'.<sup>52</sup> As early as in his earlier glosses, Abelard had pointed out that the verb in the phrase 'quod predicatur' refers to the potentiality, rather than the actuality of being truly ('veraciter') predicated.<sup>53</sup> Thus it is quite understandable that Abelard should replace the usual 'quod predicatur' with 'predicabile', the neuter of 'predicabilis', in the mere sense of 'that which can be predicated'. Plainly, no

<sup>51</sup> I.e. genus, differentia, species, proprium, and accidens. CAG IV-1, p. 1<sup>3-9</sup>.

<sup>52</sup> Logica 'Nostrorum petitioni', *Glossulae super Porphyrium*, p. 534<sup>3-5</sup> ed. Geyer: "[...] descriptionem generis nos transferamus, quae talis est: predicabile de pluribus differentibus specie in eo <quod, om. Geyer> quid est". Likewise, in his *Dialectica* (V, p. 538<sup>29-31</sup>, ed. De Rijk, Assen 1970, the paraphrase 'quod predicatur' is found.

<sup>53</sup> Logica 'Ingredientibus', *Glossulae super Porphyrium*, p. 36<sup>6-8</sup>, ed. Geyer: "idest esse illud, tam voce quam sensu simplex, quod habile est ex impositione propria et natura subiectarum rerum ad enuntiandum veraciter de pluribus in nominatione diversorum". Compare Frede (1987, 32), who also opts for 'to predicate truly': "For clearly what makes something a genus of something is not that somebody happens to predicate a genus-term of that thing but that the term is true of the thing in the appropriate way". Notice that the potentiality is already found in Aristotle's definition of universal states of affairs, *Int.* 7, 17a39-40: "I call universal that which is by its nature apt to be said (πέφυκε κατηγορεῖσθαι) of a plurality of things".

substantivation ('a predicable') is intended as yet. One of Abelard's pupils, William of Lucca (d. before 1194), too, uses the word 'predicabilis' in the general sense of 'capable of being predicated'.<sup>54</sup>

Things take a different turn, however, from about the middle of the twelfth century. In the Parisian *Ars Meliduna* (from the mid-century School of Melun), 'predicabile' is used in opposition to 'subicibile', the latter apparently used as a substantivated adjective to stand for that which can be put as a subject of a sentence: "Singulare est subicibile quod nullo modo est predicabile, velud significatum hoc nomine 'Socrates'."<sup>55</sup> From here it is just one step to the substantial, semantic (!) sense of 'predicabile' = 'that which is signified by a single term', contradistinguished from 'dicibile' = 'that which is signified by an unapplied dictum'.<sup>56</sup> The syntactical connotation clearly comes to the fore in the logical *Summa* written by Nicholas of Paris about 1230-40:<sup>57</sup>

*Summe de dialectica* VII, *De predicabilibus* (ed. Braakhuis): Quoniam igitur universale in ratione qua est predicabile, maxime commune est in intentione logica, ideo adpresens de predicabilibus videmus, antequam de argumentatione et sillogismo perscrutemur. Sciendum ergo quid predicabile et quid predicari, et quot modis utrumque sumitur. Predicabile autem et universale idem sunt in substantia. Sed *universale* dicitur secundum quod est collectivum multorum in naturam unam, sicut animal colligit hominem, leonem, et cetera animalia; similiter homo Sortem, Platonem, et ceteros homines particulares. *Predicabile* dicitur inquantum ordinatur in propositione, secundum quod est dicibile de altero. Et sic utrumque diffinivit Aristotiles in libro *Periarmenias* dicens: "Universale est quod est aptum natum dici de pluribus". Sed cum *dicibile de pluribus* sit idem quod *predicabile de pluribus*, manifestum est quod predicabile et universale idem sunt.

With reference to the item discussed in *Top.* I 9 concerning the co-ordination of categories and 'predicables', the influential Oxford treatise on logic 'Cum sit nostra' presents an interesting passage. After enumerating the different meanings of incomposite terms used for bringing up things, the anonymous author (first half of the 13th

<sup>54</sup> *Summa dialetice artis* IV, 4.38, ed. Pozzi (Padova, 1975): "[...] sed 'quidam' et 'aliquis', cum sint de pluribus predicabilia, universalia fore concedimus"; V, 5.28: "[...] terminos de se equaliter predicabiles, sicut sunt pares sive excedentes et excessi".

<sup>55</sup> De Rijk (1967) II 1, p. 315.

<sup>56</sup> Anonymous, *Tractatus Anagnini* I: *De predicabilibus*, p. 218<sup>5-7</sup>, ed. De Rijk (1967 vol. II, 2): "Significatorum autem aliud est dicibile, aliud predicabile; dicibile est quod significatur oratione, predicabile est quod significatur dictione".

<sup>57</sup> Braakhuis, *Summe de dialectica*. First Critical Edition (forthcoming), *Introduction*.

cent.) goes on to show how the contents of a category ('predicamentum') are arranged according to their 'predicability'. Discussing the universals, he describes their relationship the other way round:

Logica 'Cum sit nostra' II *De universalibus*, p. 431<sup>28</sup>-432<sup>5</sup>, ed. De Rijk (1967, II, 2): Ut dicit Aristotiles in libro Predicamentorum, singulum incomplexorum aut significat substantiam, ut 'animal', 'lignum', aut qualitatem, ut 'album', 'nigrum', aut quantitatem [...], aut habitum, ut 'armatum esse', 'calciatum esse'. Atque non sunt plura neque pauciora. Predicamentum est ordinatio predicabilium secundum superius et inferius. Predicabile est quod de aliquo est dicibile. Item. Quicquid est in predicamento aut est universale, aut singulare. Singulare est quod dicitur de uno solo, ut 'iste homo' vel 'Sortes'. Universale est quod de pluribus predicatur, idest terminus communis.<sup>58</sup>

Finally, Peter of Spain's well-known logical text-book (c. 1230), which on the Continent was in frequent use up to the seventeenth century, became the trend-setter on this subject:

*Tractatus sive Summulae logicales* II, *De predicabilibus*, p. 17<sup>+13</sup>, ed. De Rijk: 'Predicabile' quandoque sumitur proprie; et sic solum dicitur predicabile quod de pluribus predicatur. Quandoque sumitur communiter; et sic dicitur predicabile quod de uno sive de pluribus predicatur. Unde predicabile proprie sumptum et universale idem sunt, sed differunt in hoc quod predicabile diffinitur per 'dici', universale autem per 'esse'. Est enim predicabile quod aptum natum est dici de pluribus. Universale autem est quod aptum natum est esse in pluribus. Predicabile autem sive universale dividitur per genus, differentiam, speciem, proprium, et accidens.<sup>59</sup>

It may be clear from the foregoing discussion that, as far as Aristotle is concerned, the label 'predicable' is a misnomer. In the *Topics*, the four items — genus, definiens, proprium, and accident — are nameless tools, and they are only introduced to underpin the logical relationships that can be stated between several categorial designations assigned to something: thus they serve as an illustration of Aristotle's claim that in any problem or proposition these four tools are involved, since any of them discloses a thing's generic, specific etc. mode of being.<sup>60</sup> For Aristotle, to state them was pivotal in order

<sup>58</sup> Just as in *Top.*, arguments are said to be framed 'per habitudinem predicabilium' (*Tract. Anagn.* IV, p. 288<sup>13-30</sup> and 289<sup>15-21</sup>).

<sup>59</sup> For the Oxford tradition see William of Sherwood, *Introductiones in logicam* II [*Traditio* 29 (1983), 219-99], p. 237<sup>5-9</sup>, ed. Lohr c.s.: "Sicut ergo praedicatum est quod de altero dicitur, ita praedicabile est quod de altero est dicibile. Praedicabile autem dicitur communiter et proprie. Communiter dicitur praedicabile omne quod, mediante hoc verbo 'est', potest alii adiungi, sive sit commune sive sit individuum; proprie praedicabile solum est commune".

<sup>60</sup> *Top.* 4, 101b17-18 and 9, 103b39-104a2.

to bring to light the basic framework of any dialectical proof, thus preparing the specific discussions of Books II-VII.

### 5. 25 *Some notes on the title Πέντε φωναί*

The alternative title for the *Isagoge*, Πέντε φωναί (Περὶ τῶν πέντε φωνῶν), is not found until c. 500 A.D.<sup>61</sup> E.g. Ammonius CAG IV-3, p. 31<sup>6</sup> and 58<sup>18</sup>, calls the knowledge of the five items the γνῶσις τούτων τῶν πέντε φωνῶν (“the knowledge of *those* five words”). Elsewhere (p. 59<sup>9</sup>) they are indicated as “the aforesaid five words”. The special function of αἱ πέντε φωναί frequently comes to the fore. It is for example argued (p. 61<sup>17</sup>) that any significative expression must be reduced to one of the five words, and that (p. 62<sup>2-7</sup>) even for Aristotle it was indispensable to make use of precisely these five words, no less, no more; for although there are ‘seven words’ (viz. apart from our five ones, the non-significative words and those of partial application), only the common words are of the philosopher’s concern. These five are genus, differentia, species, proprium, and accidens.<sup>62</sup>

The second-order character of the five words is recognized by Ammonius, where he raises the question whether the five words should not, qua words, be subsumed to one of them, viz. the genus generalissimum. This would be absurd, he says. To reject this awkward idea he points to what we call the second-order characteristic of the five words: the generic words fall under the fivefold division not as representative of the things they signify, but just qua utterances.<sup>63</sup> The second-order perception also comes to the fore in the general assessment of the five words: Porphyry is said not to have made clear why there are only five words, but only the difference between the five significative words. He does so by pointing out the five different ways in which they are applied: some of them are said of what is specifically different, viz. genus, differentia, and accident. That is to say, of what is specifically different something is said in its capacity of being its genus, something qua the mode of being expressed by the

<sup>61</sup> The subtitle Περὶ πέντε φωνῶν, which is frequently found in our MSS (and in modern editions) is not authentic. In Alexander’s commentary on *Top.* the *Isagoge* is once referred to with the alternative title (CAG II-2, p. 371<sup>1</sup>: ὡς ἐν ταῖς Πέντε φωναῖς ἀποδίδοται), but this happens to be in one of the many interpolations by Leo Magentinus (13th cent. A.D.).

<sup>62</sup> For the whole argument see *ibid.* p. 58<sup>17</sup>-62<sup>24</sup>. Compare David CAG XVIII-2, p. 83<sup>15</sup>-85<sup>24</sup>.

<sup>63</sup> CAG IV-3, p. 63<sup>1-5</sup>.

differentia, something in so far as it concerns one of the coincidental modes of being of the thing in question. Finally, species and proprium are said of what is numerically different.<sup>64</sup> Another division divides the words that are said of what is specifically different into (1) what is said of the object in question quidditatively (ἐν τῷ τί ἐστι), viz. genus; (2) what is said of it as *quale quid* (ἐν τῷ ὁποῖόν ἐστι),<sup>65</sup> viz. differentia; and (3) what is said of it in just some respect (ἐν δὲ τῷ πῶς<sup>66</sup> ἔχει), viz. accident (*ibid.*, p. 62<sup>19-24</sup>). Clearly the division of the five words bears on the five different ways in which the attributes (designations) relate to the substrate the modes of being they signify are said of. Thus they are the five paradigms of assignment.<sup>67</sup>

The sixth century commentator David indicates the second-order character of these paradigms by calling them the five different manners (τρόποι) in which the categorial designations are used. He describes these paradigms of being said of (κατηγορεῖσθαι) in terms of (1) a substrate's own quiddity (ἐν τῷ τί ἐστι), e.g. of that which is approaching, τὸ προσιόν (supposing that there is talk of Socrates) its genus and species ('animal' and 'man'), (2) its quidditative properties (ἐν τῷ ὁποῖόν τί ἐστι), viz. differentia and proprie proprium ('rational' or 'susceptible of knowledge'), (3) a property usually following the substrate's quiddity (ἐν τῷ ὁποῖόν ἐστι), e.g. a man's being capable of laughing, or a horse's being capable of neighing), (4) a habitual property not belonging to its quiddity (ἐν τῷ ποῖόν ἐστι), viz. an inseparable accident, e.g. a raven's blackness or a swan's whiteness, and (5) a separable accident (ἐν τῷ πῶς ἔχει), e.g. Socrates's being ill.<sup>68</sup>

<sup>64</sup> CAG IV-3, p. 62<sup>11-19</sup>.

<sup>65</sup> This *quale* concerns the thing's quiddity (cf. *Cat.* 5, 3b15-16: ποῖόν τι = 'quale quid'), and should not be confused with the category Quality (ποιότης, discussed in *Cat.*, ch. 6).

<sup>66</sup> The reading πῶς found in the edition is not correct, because the indefinite noun is intended (Latin: 'aliquaqualiter').

<sup>67</sup> That Ammonius takes the division to (primarily?) bear on statement-making appears from his illustration (*ibid.* p. 62<sup>23-24</sup>): "When asked how Plato is doing, we say that he is healthy, or ill, or seated, or upright, and that sort of thing".

<sup>68</sup> CAG XVIII-2, p. 85<sup>25</sup>-86<sup>8</sup>: Πέντε οὖν οὐσῶν τῶν φωνῶν, ὡς ἐδίδαξεν ἡ διαίρεσις (ἔστι γὰρ γένος εἶδος διαφορά ἴδιον συμβεβηκός), πέντε εἰσι καὶ οἱ τρόποι τῶν κατηγοριῶν τῶν φωνῶν, τουτέστι [τοῦτ' ἐστι ed.] πέντε τρόποι εἰσὶν οἱ κατὰ τῶν φωνῶν τούτων φερόμενοι: ἔστι γὰρ τί ἐστιν, ὁποῖόν τί ἐστιν, ὁποῖόν ἐστι καὶ ποῖόν ἐστι καὶ πῶς ἔχει. καὶ τό μὲν γένος καὶ τὸ εἶδος ἐν τῷ τί ἐστι κατηγοροῦνται (ἐρωτώμενοι γὰρ τί ἐστι τὸ προσιόν ἢ ἄνθρωπος λέγομεν ἢ ζῷον, καὶ ἰδοὺ τὸ μὲν ζῷον γένος ἐστι τὸ δὲ ἄνθρωπος εἶδος), ἡ δὲ διαφορά καὶ τὸ ἴδιον οὐσιώδες ἐν τῷ ὁποῖόν τί ἐστι κατηγοροῦνται (ἐρωτώμενοι γὰρ ὁποῖόν τί ἐστι τὸ προσιόν ἢ λογικὸν λέγομεν ἢ νοῦ καὶ ἐπιστήμης δεκτικόν. καὶ ἰδοὺ τὸ μὲν λογικὸν διαφορά ἐστι τὸ δὲ νοῦ καὶ

As for the Latin phrase ‘quinque voces’, to my knowledge it was not in use by Medieval logicians. Its Greek equivalent is found in one of the three versions<sup>69</sup> of John Damascene’s *Dialectica* (5.95), but the one used by Robert Grosseteste for his translation (*Sancti Joannis Damasceni Dialectica*), made in Oxford between 1232 and 1242, apparently did not contain any reference to Porphyry’s *Isagoge* under the title Πέντε φωναί.

### 5. 3 *Other preliminaries concerning topical argument*

Chapters 10-18 of the first book of the *Topics* deal with some other introductory matters one has to be familiar with in order to understand the use of the various commonplaces of argument (τόποι), which as general starting-points of probability will come under examination in the lion’s share of the remaining books, II-VIII.<sup>70</sup>

#### 5. 31 *Dialectical propositions, problems, and theses. Kinds of argument*

Not every proposition nor every problem, Aristotle says (10, 104a4-8), can be set down as dialectical, for no man of sense will enter a dialectical dispute with a proposition of what no one holds, nor yet make a problem of what is obvious to everybody or to most people: the latter raises no question, while the former no one would subscribe to. Next the dialectical proposition (πρότασις διαλεκτική) is defined (a8-12) in terms of a special dictum or *that*-clause, to wit “a position in question form” (ἐρώτησις)<sup>71</sup> which is held by everyone or

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ἐπιστήμης δεκτικὸν ἴδιον οὐσιῶδες), τὸ δὲ ἴδιον ἐπουσιῶδες ἐν τῷ ὁποίῳ ἐστὶ κατηγορεῖται (ἐρωτώμενοι γὰρ ὁποῖόν ἐστιν ὁ ἄνθρωπος λέγομεν γελαστικὸν καὶ ὁποῖόν ἐστιν ὁ ἵππος λέγομεν χρεμετιστικόν), τὸ δὲ ἀχώριστον συμβεβηκὸς ἐν τῷ ποίῳ ἐστὶ κατηγορεῖται (ἐρωτώμενοι γὰρ ποῖόν ἐστιν ὁ κόραξ λέγομεν μέλαν καὶ ποῖόν ἐστι κύκνος λέγομεν λευκόν), τὸ δὲ χωριστὸν συμβεβηκὸς ἐν τῷ πῶς ἔχει κατηγορεῖται· ἐρωτώμενοι γὰρ πῶς ἔχει Σωκράτης λέγομεν ὅτι ὑγιαίνει ἢ κινεῖται. Another elucidation of the meta-character of the five paradigms is presented by David, *ibid.*, p. 132<sup>26</sup>-133<sup>3</sup>.

<sup>69</sup> Two early redactions of this work were in existence, a long one of 68 chapters, a shorter one of 15 chapters, both probably written by Damascene between 742 and 749. Our later MSS are a mix of the two versions, in which also the order of the chapters is changed.

<sup>70</sup> For detailed comments upon *Top.* I, chs. 10-18, see Smith (1997), 77-103; 179-82.

<sup>71</sup> For ‘question’ taken as a question’s objective content cf. τὸ λεγόμενον (my *Index* s.v. and my section 1.71: Main Rule, RIR).



by the majority or by the wise — either by all of them, or by most, or by the most notable of them — provided it is not contrary to common opinion;<sup>72</sup> for it should not be opposed to the opinions of most men. The exemplification found (at 104a15-33) confirms that the *πρότασις* is a *that*-clause or dictum, rather than an assertion. People assent to the experts' views running *that* things are so-and-so, and so on, so the *πρότασις* is a proposition in the modern sense. Thus Aristotle (104a33-37) can wind up the chapter by claiming that plainly all *opinions* that are in accordance with the arts are dialectical propositions, e.g. opinions held by the doctors or geometers.

In the next chapter a dialectical problem is defined along the same lines. First its content is clearly described (104b1-5) as a subject-matter of inquiry (*διαλεκτικὸν θεώρημα*). It is something about which either people have no opinion either way, or most people hold an opinion contrary to that of the wise or the other way round, or each of these classes disagree among themselves. The examples given (b7-16) by Aristotle are likewise views in the shape of dictums framed in question form, e.g. 'whether the universe is eternal or not'.

A dialectical thesis is a *πρόβλημα* of a special nature. It is defined and exemplified (104b19-28) as a peculiar opinion (*ὑπόληψις*)<sup>73</sup> that conflicts with general opinion but is propounded by some famous philosopher, e.g. Antisthenes's view that contradiction is impossible, or that of Heraclitus that all things are in motion, or Melissus's thesis that Being is one; to take notice of an ordinary man's peculiar opinions would be silly. But also opinions that, while they may be unacceptable, are nevertheless underscored by some reasonable grounds may be taken as theses susceptible of dialectical disputation, for example, the view maintained by the Sophists that not everything that is, either has come into being or is eternal. This position is underscored by a semantic reasoning to the effect that the educated-man-with-grammatical-education is in existence without ever having come into existence in that capacity, nor being so eternally.<sup>74</sup>

<sup>72</sup> Smith (1997), 78.

<sup>73</sup> For the use of *ὑπολαμβάνειν* to stand for taking up an ill-founded position see Liddell & Scott, s.v. III.

<sup>74</sup> The Sophists play on the ambiguity of the phrase 'a-man's-being-a-grammarian comes into existence', which may be wrongly taken to imply that the man did not himself exist before; when reasonably rejecting this view, they argue that there cannot be talk of becoming at all, while deviously suggesting that therefore the man has never come into existence; and likewise the issue of 'non-eternal' is played on.

It is stated finally (105a7-9) that the subject-matter should not border too closely on the domain of epistemonik proof (ἀπόδειξις), nor yet be too far removed from it, since the former cases admit of no doubt, while the latter concern difficulties which are outside the scope of dialectical training.

There are two main types of argument — one induction, the other what has been defined before (1, 100a25-27) as deductive reasoning (συλλογισμός). Induction (ἐπαγωγή) is the passage from particular states to universal ones. E.g. the argument that if the skilled pilot is the best one and the same goes for the skilled charioteer, then in general the skilled man is the best in any particular field. Induction is the more convincing and clear: indeed,<sup>75</sup> it is more easily grasped by sense-perception, and is within the grasp of the mass of people.<sup>76</sup> But deductive reasoning is more cogent and more effective against disputatious people.

### 5. 32 *How to become well supplied with reasonings*

Next the author takes up the discussion of the ten categorial modes of being and the four ways of assigning them to things, which preceded the intermezzo of chs. 10-12, with the words (13, 105a20-21)<sup>77</sup>: “The classes, then, of the things about which (περὶ ὧν), and of the things out of which (ἐξ ὧν) arguments are framed, let they be determined in the aforesaid way”. The means by which we obtain an abundance of reasonings are four: (1) the provision of propositions, (2) the ability to distinguish in how many senses a particular expression is used, (3) the discovery of the dissimilarities (διαφοραί)<sup>78</sup> between things, and (4) the observation of what is similar between them. In a sense, it is claimed (105a25-33), not only the first item bears on propositions (προτάσεις): in a way, the three others are propositions as well, for it is possible to frame a proposition in accordance with these items. For instance, (re (2)) ‘that “desirable” means either the honourable or the pleasant or the expedient’, or

<sup>75</sup> Taking the first καί at 105a17 explicatively.

<sup>76</sup> Induction is extensively discussed in my section 2.5. For ‘example’ (παράδειγμα) and enthymeme (‘syllogism starting from probabilities or signs’) see *ibid.* and *APr.*, chs. 24 and 27.

<sup>77</sup> Cf. I 9, 103b39-104a2.

<sup>78</sup> For διαφορά = ‘dissimilarity’ see e.g. *Top.* I 7, 103a16; *Meteor.* I 3, 340b9; II 4, 360b14; *HA.* III 1, 509a28; *Pol.* II 8, 1269a27; *EN* VI 9, 1141b34; for the sense ‘different kind’ see my *Index* s.v..

(re (3)) 'that sensation differs from knowledge in that the latter may be recovered again after it has been lost, while the former cannot, or (re (4)) 'that what is healthy is related to health in the way as a good bodily condition is to good condition'.<sup>79</sup>

The next chapter (I, 14) enumerates the various ways in which propositions may be selected for dialectical disputation. They correspond to the various types of dictums (taken in the modern sense) available, to wit either general opinions, or those of the majority, or the wise etc., or views contrary to these, or views similar to them. After their subject-matter they divide into ethical, physical, and logical propositions. They are of the following types, respectively: 'Ought one rather to obey one's parents or the laws, if these are at variance?', 'Is knowledge of contraries the same or not?', and 'Is the universe eternal or not?' (105b19-29).

Unlike philosophic purposes, which force us to deal with propositions from the viewpoint of truth, purposes of dialectic allow us to treat them with a view to opinion. The strategy of argument is this: Take first the propositions in their most general form, and then differentiate them; for example, 'The knowledge of opposites is the same', 'The knowledge of contraries is the same', and finally, 'The knowledge of correlative things is the same'; and the last one, in turn, should again be split up, by talking of the knowledge of good and evil, that of black and white, cold and hot, and so on, as long as division is possible (105b30-37). From the last words it is plain what Aristotle has in mind when saying earlier (105b25-29) that the purport of each of the aforesaid propositions is not easily recognized by defining them, so we must try to become familiar with them through the habitual practice of induction, examining them in the light of the explication of the universal example. Since the truth or plausibility of, say, 'The knowledge of correlatives is the same' is not easily gathered from defining the notion of being correlative, the exemplification of correlatives is more conducive to this end.

In the subsequent chapters (15-18) the three devices whereby we are to become well supplied with reasonings, mentioned earlier (105a21-25), will be extensively discussed. First, a term's multiplicity of meaning will be examined.

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<sup>79</sup> At *EN* V 12, 1143b25, the two notions are put on a par, while at 11, 1138a30-31, the part the healthy plays in the medical art is equated to that of good condition in the art of bodily training.

5. 33 *How to deal with multiplicity of meaning*

As regards the number of ways in which a term can be used, we must not only deal with terms that are used in more than one way, but also try to explain the different uses. For instance, we must not merely say that justice and courage are called 'good' in one sense, and what is conducive to bodily condition and health are so in another, but also say that the former are so called owing to a certain immanent quality, the latter instead because they are productive of a certain result in other things (106a1-8).<sup>80</sup>

Whether or not a term is used with different senses can be discovered in various ways. You have to look and see:

(1) whether a term's contrary involves different senses. E.g. the contrary of 'sharp' when used of a note is 'flat', when used of a solid edge it is 'blunt, so 'sharp' must have different senses itself (106a9-22).

(2) whether, even though there is no discrepancy of any sort in the names used, the specific variation is at once obvious in their use. E.g. there is no discrepancy between sounds and colours being called 'clear' and 'dim', but 'clear' is not used in the same sense when applied to colour as when applied to sound (106a23-35).

(3) whether there is a contrary of a term in one sense, but none in another sense. E.g. the pleasure of drinking has a contrary in the pain of thirst, while the pleasure of seeing that the diagonal is incommensurate with the side has no contrary. It is likewise with 'loving'; when used of the mental state, it has a contrary in hating, but used of the physical act ('making love') it has no contrary<sup>81</sup> (106a36-b4).

(4) whether some meanings of terms and their contraries have intermediates (τι ἀνὰ μέσον) while others have none, or not the same intermediate. E.g. in the case of 'clear' and 'dim' when applied to colour and sound (106b4-12).

(5) whether a term's contradictory opposite has more than one sense. E.g. since 'not to see' is used in more than one sense, viz. 'not possessing sight' and 'not exercising the faculty of sight', 'to see', too has more than one sense (106b13-20).

Similar observations should be made in other respects:

(6) with regard to the privation or the presence of a certain state ('lacking perception', 'having perception') (106b21-28).

<sup>80</sup> This rule is obeyed e.g. at 107a3-b5 below.

<sup>81</sup> For the *double entendre* in φιλεῖν see Verdenius (1968), on *Top.* I 15, 106b3-4.

(7) with regard to inflected forms (πτώσεις)<sup>82</sup> as compared to the basic word ('justly', 'just') (106b29-107a2).

(8) Sometimes a term's having more than one sense should be discovered by examining the general senses of the designations conveyed by a certain name (τὰ γένη τῶν κατὰ τοῦνομα κατηγοριῶν), seeing if they are the same in every case. E.g. 'good' does not have one general sense when applied to food, a medicine, the soul, or man. Similarly, λευκόν as applied to bodies bears on its colour, as applied to a note it means 'easily heard'. Therefore 'good' does not mean the same when combined with 'food', 'medicine', 'soul' or 'man'; and the same goes for λευκόν (107a3-17).

(9) If things fall under the same term you should examine whether their genera are different without being subordinate. E.g. when defining ὄνος ('donkey'), which means both an animal and a machine ('windlass'), you find out that they have different definientia, one describing a certain animal, the other a certain machine, and these genera are not subordinate, such as are the genera 'animal' and 'bird' (107a18-31).

(10) The foregoing observation should be sharpened by looking into the case of the contrary of the term by which the proposed thing is indicated; for if the contrary has more than one sense, clearly the term indicating the thing under discussion has too (107a32-35).

(11) An alternative to rule (8) is to start from each of the composite expressions (τὸ συντιθέμενον), such as λευκὸν σῶμα ('white body') and λευκὴ φωνή ('clear note'), and see whether if what is peculiar to them (viz. 'body' and 'note') is subtracted, the same sense of λευκός is left. If not, the term is not used synonymously (107a36-b5).

(12) Sometimes the homonymous use of an accompanying<sup>83</sup> notion is unnoticed, and should be exposed by defining it. E.g. if someone describes what betokens and what produces health as 'commensurably related to health' we must examine what the man means by 'commensurably' (συμμέτρως) in each case. By defining this notion the different uses will come to the fore (107b6-12).

(13) You should see if the term in different uses is equally assignable in respect of the designated property's intensity. E.g. the property

<sup>82</sup> The word πτώσις is used to stand for any modification of a word, to wit, cases and genders of substantives and adjectives, or adjectives deriving from nouns, or adverbs formed from adjectives, and also the tenses of verbs.

<sup>83</sup> The verb παρακολουθεῖν here has its usual logico-grammatical sense "to be combined with", not 'to creep in' (*Oxf. Transl.*).

conveyed by 'sharp' is not of a like intensity, when assigned to a flavour and a note (107b13-18).

(14) Since the nature of the differentiae of different non-subordinate genera are also specifically different (such as those of 'animal' and 'knowledge'), you must see if the things falling under the same name are in fact the differentiae of different non-subordinate genera. E.g. 'the sharp' <thing> as said of a note and a solid body must be taken to be said homonymously, because 'voice' and 'body' are different non-subordinate genera (107b19-27).

(15) Again, you must see if the differentiae of the things falling under the same name are different. E.g. 'colour' is used both of bodies and of tunes. That it is used homonymously of them appears from the definiens of 'colour' when it is said of bodies, viz. 'what is visually dispersive and compressive', which definiens does not apply to tunes, since these differentiae (of white colour and black colour, respectively)<sup>84</sup> do not hold of colour in tunes (107b32-37).

(16) Since something's species is not its differentia, look and see if one of the things falling under the same name is a species, while the other is a differentia. E.g. λευκόν said of a body is a species of the genus 'colour'; as applied to a note it is a differentia, for one note differs from another by its being λευκή (107b33-37).

### 5. 34 *How to notice dissimilarities and resemblances*

As for the dissimilarities mentioned earlier (105a24), they must be viewed both within the various genera as closely related to one another — but so should the dissimilarities occurring from one genus to another, provided they are not too far apart. Those of the former kind are in order in questions such as 'In what does justice differ from courage and wisdom from temperance?'; for all these belong to the same genus, viz. virtue. An example of the second group is 'In what does sensation differ from knowledge?'; the two are indeed different genera, but not too widely divergent. Of course, it would be silly to seek for subtle differences between genera that are very far apart (chapter 16, 107b38-108a6).

Resemblances (spoken of earlier at 105a24-25), finally, must be examined in things belonging to different genera. For example, as knowledge is related to the object of knowledge, so sensation is

<sup>84</sup> Cf. Plato, *Tim.* 67D-E; Arist., *Top.* III 5, 119a30-31; IV 2, 123a2; VI 3, 153a38-b1; *Met.* I 7, 1057b8-10; Theophrastus *De sensu*, cap. 86.

related to the object of sensation; or as sight is in the eye, so reason is in the soul, and as a calm is in the sea, so windlessness is in the air. In particular, practice is needed in dealing with genera that are widely divergent; for in the other cases we will be able to see the similarities at one glance. We should also look at things that are within one and the same genus, to see if there is any attribute belonging to them all, for instance, to a man, a horse, and a dog. For in so far as they have the same attribute (e.g. 'being sensitive') they are alike and so may be put on a par, if this is useful for the sake of the disputation (ch. 17, 108a7-17).

### 5. 35 *On the usefulness of the three devices*

It is useful to examine the various meanings of a term both for the sake of clarity and also with a view to ensuring that our reasonings shall be concerned, not with the name or designation under discussion, but the object conveyed by it (πρᾶγμα). Otherwise the opponents and the respondents are talking at cross-purposes. It is also useful so that one may not be misled and that one may mislead others by false reasoning.

Then the reader is given good advice for outsmarting the adversary. When we have the role of opponent ourselves, we will be able to mislead the respondent, if he does not happen to know the various meanings of a term. However, this manner of argument is merely an ultimum remedium: it is not a proper part of dialectic. Dialecticians should be very much on their guard against such verbal discussion, unless, of course, it is simply impossible to discuss the proposed subject in any other way (ch. 18, 108a18-37).<sup>85</sup>

Next, the use of discovering dissimilarities is sketched, particularly with regard to recognizing a thing's proper nature, different as it is from similar things. In fact, in order to disclose a particular thing's nature, we usually set apart its proper definiens by means of its distinctive properties (108a38-b6).

The examination of what is similar, finally, is useful both for inductive arguments (λόγοι ἐπακτικοί)<sup>86</sup> and suppositional (ἐξ ὑποθέσεως) reasonings, and also for rendering definitions at the opponent's request.<sup>87</sup> For inductive arguments it is useful because it is by induction

<sup>85</sup> See *Top.* II, 3; 5; 6, 112b15-20; III 1, 116a20-22; IV 6, 128b3-9; VIII *passim*, esp. 10, 161a13-15; *SE* 12-13, 15 and 17 *passim*.

<sup>86</sup> I.e. arguments making use of induction; my section 2.54.

<sup>87</sup> The technical term ἀπόδοσις connotes the idea of 'giving as an answer'.

of particulars on the basis of resemblances that we claim to have evidence of the universal. It is useful for suppositional reasonings because it is an accepted opinion that whatever holds of one of a set of similar things, also holds of the rest, supposing, that is to say, that whatever holds good of other similars does so equally of the one under discussion. One should notice that Aristotle twice emphasizes the conventional character of taking such inferences to be conclusive ('we claim', 'accepted opinion'), which seems adequate enough for dialectical disputation (108b7-19).

The rendering of definitions too can benefit from the consideration of similarities because, if we are able to see at one glance what is identical in each particular case we shall not be at a loss about the genus in which we must place the subject under discussion when we are defining it; for of the common attributes that which is most definitely assigned to it in the essential line of namegiving (ἐν τῷ τί ἐστὶ κατηγορούμενον) must be the genus. This is also the case when we are dealing with widely divergent subjects, e.g. the positions 'that there being a calm<sup>88</sup> at sea and there being a windlessness in the air are the same 'thing' (for each is a state of quiet)', or 'that a point on a line and a unit in number are the same thing' (for each is a starting-point). Those who have the task of defining nearly always go about it in this manner; for they say that the unit is the starting-point of number and the point that of line, and in doing so they clearly assign the label 'genus' to what is common to both (108b19-33).

#### 5. 4 *The commonplaces regarding coincidental modes of being*

Books II and III contain an extensive discussion of the commonplaces concerning coincidental modes of being. It is introduced by some remarks about problem propositions in general, which are followed by a brief discussion of a precarious difficulty concerning problems based on the assignment of coincidental attributes.

##### 5. 41 *The division of problem propositions*

The first remark (108b34-109a10) is about the division of problem propositions according to their subjects, and the corresponding

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<sup>88</sup> For γαλήνη and νηνεμία as nominalizations including connotative 'be', see my section 1.64.



methods of corroborating or overthrowing them. In keeping with *Int.* 7, 17a38-b17, the problematic positions<sup>89</sup> divide into universal and particular ones. The samples are: 'Every pleasure is something good' — 'No pleasure is something good', and 'Some pleasure is something good' — 'Some pleasure is not something good'.

The methods of corroborating and overthrowing universally are common to both kinds of problem propositions; for when we have shown that an attribute belongs (ὑπάρχει) in all instances, we shall also have shown *eo ipso* that it belongs in some particular instance, and so the other way round in the case of negative sentences. The universally destructive methods deserve our attention first and foremost, since such methods are common both to universal and particular propositions, and because of the fact that people more usually propose theses in the affirmative than in the negative; so disputants usually have to overthrow their adversary's theses.<sup>90</sup>

#### 5. 42 *A semantic difficulty concerning coincidental modes of being*

Next there is an intriguing discussion (109a10-26) of a semantic difficulty occurring when an attributive<sup>91</sup> term conveying a coincidental mode of being is in order. It arises from the fact that unlike when a genus, definiens, or proprium is involved, in this case the assignment of the appropriate appellation deriving from a coincidental mode of being jeopardizes the usual correlation of the ὑπάρχειν and the ἔστι formulas. This means that the usual reciprocation (ἀντιστροφή) of, say, 'animal falls to [x]' and '[x] is an animal', which is required for correctly exchanging such formulas, may be (and usually is) missing in the case of coincidental attributes. Thus the formula 'paleness falls to [x]' is not reciprocatively interchangeable with '[x] is pale'.

What Aristotle has in mind may be clarified by his contrasting this situation with the cases in which one of the three other items, definiens, genus, and proprium, is in order:

<sup>89</sup> The προβλήματα are in fact problems invested in the shape of positions. Unlike the examples occurring in Book I, these have the form of assertions, but, noticeably, they all have the assertoric operator ἔστι in emphatic position; see my sections 2.13-2.16.

<sup>90</sup> See *Top.* II 2, 109b13-29.

<sup>91</sup> Taking (358) the later copula construct 'S is P' as representative of Aristotle's statement-making utterance, leads Zadro to accuse Aristotle of confusing semantics and syntax in the subsequent lines.

*Top.* II 1, 109a10-26: Reciprocation of an appellation (ὀνομασίαν) that is appropriately drawn from a coincidental mode of being is an extremely precarious thing. For in the case of coincidental attributes, and of these alone,<sup>92</sup> the expression 'in a sense and not universally' (τὸ γὰρ πῃ καὶ μὴ καθόλου) may occur. — Reciprocation necessarily follows from <the use of attributes drawn from> the definiens, the proprium, and the genus. For example, if being a two-footed terrestrial animal falls to [x], then it will be true by conversion (ἀντιστρέψαντι) to say that [x] is a two-footed terrestrial animal. Likewise also, if the appellation is drawn from the genus; for if being an animal falls to [x], then [x] is an animal. The same thing occurs in the case of a proprium: if being capable of learning grammar falls to [x], then [x] will be something capable of learning grammar. For it is impossible for any of these attributes to belong or not belong in a restricted way (κατὰ τι), but they either belong or do not belong, period (ἀπλῶς). — In the case of coincidental modes of being, on the other hand, there is nothing to prevent an attribute from belonging in a restricted way, e.g. paleness or justice. Hence it is not enough to show that paleness or justice falls to [x] in order to show that [x] is pale or just; for this is open to dispute, saying that it is in a restricted way that [x] is pale or just. Hence it follows that in the case of coincidental modes of being, reciprocation is not necessary.<sup>93</sup>

The use of the verb ἀντιστρέφειν should be paid due attention. This verb, basically meaning 'turn to the opposite side', 'turn in the opposite direction', is used by Aristotle to stand for 'convert'. Conversion, then, is considered an admissible procedure from the logical point of view,<sup>94</sup> and so ἀντιστροφή is employed in *APr.* for proving the validity of imperfect syllogisms,<sup>95</sup> where the procedure consists in proving the opposite of one of the premisses by assuming the opposite of the conclusion. When used intransitively, the verb has the sense 'to admit of being converted', hence: 'to be convertible' or 'reciprocate'.<sup>96</sup> In our passage the verb is used in turn transitively (at a10 and a15) and intransitively (at a14 and a26), so as to make the transitive verb come close to meaning 'to take as reciprocating'.

If someone asks about, say, Socrates the τί ἐστί question you can correctly and without any restriction answer that he is 'a two-footed

<sup>92</sup> The word μόνων is emphatically used. Aristotle means to say that of all cases you will find the problem with coincidental attributes.

<sup>93</sup> Zie Brandis, *Scholias*, p. 264a35-41.

<sup>94</sup> Liddell & Scott (s.v. II) erroneously take the word at *Top.* VIII, 163a20 to mean 'to retort (arguments)'.

<sup>95</sup> *APr.* II, chs. 8-10; cf. *Top.* VIII 14, 163a30-36.

<sup>96</sup> E.g. *Cat.* 5, 2b21; 7, 6b28-7b14 (6b28 ἀντιστρέφοντα = 'reciprocating correlatives'); 12, 14a30-b29; *Int.* 13, 22a15-22; *GC.* II 11, 337b23; *An.* II 11, 423a21; *Problem.* V 25, 883b8; Bonitz, *Index*, 66a32-b34.

terrestrial animal', or 'an animal', or 'a being capable of learning grammar', since the definiens as well as the genus and the proprium grasp him in his essence, 'being a man'. But when paleness falls to him, the τί ἐστὶ question cannot be answered unequivocally, since the paleness is only a coincidental mode of being of his, and Socrates is not 'paleness' but merely 'something affected by paleness'. In fact, what Aristotle has in mind here is that the ὑπάρχειν formula concerning Socrates-terrestrial-animal-receptive-of-grammar can easily be rephrased in an ἔστι formula, while in the case of a coincidental designation (ὀνομασία) such a transformation is a precarious thing. Most of the time the transformation is not allowed (since it is not 'necessarily practicable'; 109a25-26), but sometimes it is possible, as is implied by the same lines; this is precisely why the transformation is a 'precarious thing' (109a10).

Clearly, Aristotle is alluding to what we were told earlier (*Top.* I, 9) about the τί ἐστὶ question as applied to incidental modes of being. In such cases, too, it is possible to ask for the 'what-it-is' of the coincidental mode of being itself, irrespective of its being enmattered in this or that entity. Hence taking paleness falling to Socrates, you may say when asked for the essence of Socrates's paleness that it is a colour, and reformulate 'paleness or being pale falls to Socrates' into 'colour or being coloured falls to Socrates', and, accordingly, 'Socrates's being pale is a being coloured'. By doing so, you are really reciprocating an appropriate appellation (ἀντιστρέφειν τὴν οἰκείαν ὀνομασίαν; 109a10-11) without being engaged in the error of mistaking the accident for a genus. The latter, incidentally, will be dealt with in the next chapter discussing the first commonplace (109a34-b12), where the error is discussed of saying that being a colour falls to what is white.

#### 5. 43 *Two more errors bearing on the semantics of naming*

Chapter 1 winds up (109a27-33) with a brief warning against two basic errors which may incur when dealing with problem propositions. One is called ψεύδεσθαι and consists in assigning a false attribute to a hypokeimenon, the other in naming the hypokeimenon by an erroneous name. The latter is called 'transgression of the established locution' (παρὰβαίνειν τὴν κειμένην λέξιν), and explained as 'to address the things (προσαγορεύοντες πράγματα) by names which belong to other things'. E.g. by calling a plane-tree a

‘man’, one transgresses the established nomenclature (τὴν κειμένην ὀνομασίαν).

By assigning a false attribute, e.g. ascribing the property of being blue to the thing proposed (προκείμενον), say, a green plane-tree, one commits an error (‘this plane-tree is blue’). But when you assert of this tree ‘this man is green’, you are not speaking falsely, but violating the established manner of naming. This too is to frustrate dialectical disputation, since your adversary cannot let this pass, though he cannot blame you for saying something false; and, what is more, the erroneous naming did not prevent you from assigning the correct attribute ‘green’ to the plane-tree before you.<sup>97</sup> Interestingly enough, Aristotle does allow the use of names in a new imposition, as when using e.g. ‘cloak’ to stand for ‘man *plus* horse’ or ‘pale man’.<sup>98</sup>

#### 5. 44 *Some important semantic issues in the discussions of ‘accident’*

As we have seen before (my section 5.42), a coincidental mode of being is easily mistaken for a generic one. The first commonplace regarding ‘accidents’ (i.e. coincidental modes of being) is to look to see whether the opponent has rendered as an accident something which falls to the thing before you in some other way (2, 109a34-b12). This mistake is mostly committed with regard to genera, Aristotle says, for example if someone were to say that being a colour falls to what is white, meaning, that is, ‘the white <thing> (τὸ λευκόν) is a colour’,<sup>99</sup> forgetting that colour is not an accident of ‘white’, but its genus.

So far the case is clear enough. But in the subsequent lines (109a39-b12) Aristotle goes on to explain the situation. His words are standardly<sup>100</sup> taken to refer to the different ways in which the opponent may commit the error, one quite openly, the other less overtly. In my opinion, what Aristotle is doing here is teaching us how

<sup>97</sup> A similar issue is discussed by Donnellan (1977), 48; 60-4. Seeing at a party, for instance, an interesting-looking person holding a Martini glass, you may successfully designate him or her to others as ‘this good-looking Martini drinker’, despite the fact that there is only water in the glass; and using a definite description referentially, a speaker may say something true about the subject, even though the description by which it is brought up applies to nothing.

<sup>98</sup> *Int.* 8, 18a19; *Met.* Z 4, 1029b27-28. This device plays an important role in Aristotle’s semantics. My section 9.32.

<sup>99</sup> Instead of correctly either ‘the white thing is coloured’, or ‘the whiteness or being white is a colour’.

<sup>100</sup> Pickard-Cambridge, Forster, Tricot, Reale.

to disclose and remedy the man's mistake. The first way is to determine (διορίσαι) the problem-proposition proposed;<sup>101</sup> the other, to observe the man's ignoring the rule of paronymy, saying that an attribute drawn from a genus is never applied to a species in an inflected form ('paronymously').<sup>102</sup> As for the verb διορίζειν, I take it to have here the sense 'to identify by analysing'.<sup>103</sup> Thus my rendering is completely different:

*Topics* II 2, 109a39-b12: In fact, it is possible to identify that which is proposed, e.g. 'that justice happens to be a virtue' according to its appellation <and thus expose the confusion between 'the just' qua thing and qua property, justice>. But often, even without such an analysis, it is obvious that he has assigned the genus as an accident, e.g. if one were to say that the pale [= paleness] is coloured or that the walking [=ambulation] is moving; <obvious enough indeed>, for an attribute drawn from the genus is never assigned to the species in an inflected form (παρωνύμως), but always the genera are said of their species synonymously (συνωνύμως). A person, therefore, who speaks of \*the pale as a coloured <thing> has not rendered <this attribute> as a genus, since he has used an inflected form; nor as proprium or definiens, for the definiens and the proprium falls to nothing else, whereas many of the other things are coloured, e.g. a log, a stone, a man,<sup>104</sup> or a horse. Clearly then he is rendering <the attribute> as an accident.

Subsequently, a great number of commonplaces are discussed. I shall confine myself to some things that are interesting from the viewpoint of logic and semantics.

In *Top.* II, 5 the problem of implicit assertions is taken into consideration. It is claimed (112a16-23) that anyone who has made any assertion whatsoever, has in a way made a number of assertions, because each assertion has a number of necessary sequels. For instance, whoever has said that [x] is a man, has, by implication, said the [x] is an animal, a biped, an animate entity, and something that is capable of insight and knowledge. Hence if any of these sequels are demolished the original assertion is overthrown as well. This procedure is elsewhere called a 'proof by constitution' (μετάληψις), being that in

<sup>101</sup> Reading τὸ τιθέμενον (= 'that which is proposed', as at *APr.* I 27, 43a20; cf. *Int.* 13, 22a14), instead of the MSS reading τὸν τιθέμενον (= 'he who is making the statement').

<sup>102</sup> *Cal.*, ch. 1. The rule is here explained (109b6-7) in terms of its counterpart, 'synonymy': "for the species take the name and its definiens of their genera", without somehow inflecting these names, that is.

<sup>103</sup> The Greek verb basically means 'draw a boundary through'; hence: 'delimit, delineate, map out, identify by analysing, characterize, make clear' etc.

<sup>104</sup> Clearly, λευκός ἄνθρωπος is not exclusively used for 'pale man'.

which the assignment of an attribute to  $[x]$  is proved by showing that  $[x]$  possesses a substituted attribute (τὸ μεταλαμβάνόμενον).<sup>105</sup>

In chapter II, 7 we find (112b27-113a19) the expression συμπλέκειν used for the formation of contrary (incomplete) dictums, which are representative of incompatible mental dispositions. There are six ways of combining contrary notions, four of which combinations are effective of a real contrariety in that they proceed from mental dispositions which are incompatible. That there are six ways in general is made clear as follows. Either (1) each of the contrary notions, say, 'friend-enemy' and 'to do good-to do harm', respectively, will be combined with each limb of the other contrary cluster, and this in a twofold way: (1a) 'to do good to friends' with 'to do harm to enemies', or conversely, (1b) 'to do harm to friends' with 'to do good to enemies'; or (2) both expressions of the second cluster are combined with each of the notions of the first cluster: (2a) 'to do good to friends' with 'to do harm to friends' and (2b) 'to do good to enemies' with 'to do harm to enemies'; or (3) one of these expressions is combined with each of the items of the first cluster: (3a) 'to do good to friends' with 'to do good to enemies', and (3b) 'to do harm to friends' with 'to do harm to enemies'. The items (1a) and (1b), of course, are not contrary, proceeding as they may from one and the same temperament.<sup>106</sup>

An interesting remark is made about the mental status of the Platonic Forms. The commonplace is discussed (113a24-32) that you should look and see if anything has been said about something particular, of such a kind that if it should be the case, contrary attributes must fall to the thing under discussion: for example, if your opponent has said that the Ideas (τὰς ἰδέας) are dwelling in us. For, if so, it will follow that they are both in motion ('changing') and in rest and, in addition, are both objects of sensation and of thought. For in the view of those who posit the existence of Ideas, these are at rest and merely objects of thought; but if they exist in us it is impossible for them to be unmoved ('unchangeable') — for given that we are in motion, it follows necessarily that everything in us is with us in motion as well. Next the argument is extended to the ontological immanent status of the Forms in each particular thing. Likewise, the author says, they are perceptibles too, if they exist in us: for it is

<sup>105</sup> *APr.* I 29, 45b12-46a2.

<sup>106</sup> It is noticeable that 'to do good to enemies' is to be avoided.

through the sensation of sight that we become familiar with the form (μορφήν γνωρίζομεν) present in each particular.

Clearly we meet here with a case of an actual discussion among the Platonists. Hopefully it is only adduced by Aristotle to demonstrate the argument from accident, since it has no real doctrinal impact. As a matter of fact, Plato never denied the presence of forms in things (their 'immanent status') nor our concepts of Forms in our contemplative minds (their 'mental status'). The only (and momentous) thing he kept insisting upon was that in order to safeguard the Socratic immanent normative εἶδη, you have to postulate transcendent Forms whose transitory instantiations are the forms inhering in things ('instances').<sup>107</sup>

A note on the inferential relationships between indefinite terms (ἡ κατὰ τὴν ἀντίφασιν ἀκολουθήσις) is found at chapter II 8, 113b15-26. If a man is an animal, a not-animal is a not-man. You should notice that the inferential sequence is converse: for 'animal' follows from 'man', but 'not-animal' does not follow from 'not-man', but conversely 'not-man' from 'not-animal'.

In chapter II, 9, the commonplaces bearing on things referred to by co-ordinates (σύστοιχα) and inflected word forms (πτώσεις) are taken into consideration (114a26-b5). By 'co-ordinates' are meant such expressions as 'just deeds' and 'the just man' with reference to 'justice', and 'courageous deeds' and 'the courageous man' with reference to 'courage'. Other examples are those in which the co-ordination is based upon things being productive or preservative of something, as e.g. 'healthy things' are co-ordinate with 'health', and 'vigorous constitutional things' with 'vigorous constitution'. Inflected word forms, on the other hand, are such as the following: 'justly', 'courageously', and 'healthily'. Inflected word forms, then, are usually regarded as co-ordinates, e.g. 'justly' of 'justice'. All words which are in the same co-ordinate series are called co-ordinated, e.g. 'justice', 'just man', 'just action', and 'justly'. Now attributes holding of one member of the co-ordinate series also hold of the others, such as 'praiseworthy' ('praiseworthily') of 'just' etc. In order to understand these rules it is useful to realize that in Greek the co-ordinates are simple terms, without such words as 'man', 'deed' being added.<sup>108</sup>

<sup>107</sup> De Rijk (1986), 57-65; 103-9; 140-3; 180-3; 327-30.

<sup>108</sup> Commonplaces based on opposites, co-ordinates and inflexions are frequently recommended. E.g. III 6, 119a36-38.

The eleventh chapter contains a conspicuous remark (115b3-10) on the use of attributive determinations preceded by an adverb conveying a greater or lesser degree. The rule is stated that if an attribute is assigned to something in a greater or lesser degree it also belongs to it in an unqualified sense. What is not good (or white) will never be called 'good (or white) in a greater or lesser degree'; for what is evil will not be brought up as 'having a greater or less degree of goodness than something else';<sup>109</sup> it will be named 'more or less base'. In the Middle Ages some people were of the opinion that a sentence such as 'Diabolus est minus iustus Deo' is congruous (and true). Aristotle returns to this subject in Book III 6, 119b17-30.

The previous rule is extended (115b11-35) to the use of the κατά τι phrase. It is claimed that if an attribute is possible in some respect it is also possible in an unqualified sense; the same goes for restrictions with regard to place or time.<sup>110</sup> This statement can get you into trouble, though, and the author is the first to raise a series of objections (ἔνστασις = 'counter-example').<sup>111</sup> A famous one is the case of the Triballi, a tribe from Aristotle's homeland who dwelt near the Danube. It is honourable amongst the Triballi to sacrifice one's father, but it is not honourable in an unqualified sense. Such arguments are obviously not very impressive, and amount to showing (unintentionally, though) how shallow dialectical disputations can be sometimes, so that 'you win' does not mean 'you are right'.

In the opening chapter of Book III the important semantic difference between instance and instantiation is under consideration. In the general discussion of commonplaces concerning what is less or more preferable (III, chs. 1-5), it is claimed (116a23-28) that what is precisely a particular coincidental property (τὸ ὅπερ τόδε τι ὄν)<sup>112</sup> is preferable to that which as such is not found in its genus. For example, the instantiation 'justice' ('being-just') is preferable to its (coincidental) instance 'just man', which does not fall under the same genus (in the category of Quality), but under a different one

<sup>109</sup> The Greek has: \*'more or less good'.

<sup>110</sup> At 115b29-35 ἀπλῶς is operationally defined by opposing it to πρόσθεσις: "Whatever is regarded, without anything being added (μηδενὸς προστιθεμένου), as honourable or disgraceful [...] will be thus called ἀπλῶς" (b33-35).

<sup>111</sup> This term is defined in *Top.* II 2, 110a11 ("An objection will be an attack against a thesis").

<sup>112</sup> Adding (with the Parisinus Coislinianus, the Parisinus 1843, and a lemma in Alexander) ὄν after τι. Incidentally, notice that the phrase τόδε τι is here used to stand for a particular *coincidental* form.



found in the category of Substance. Aristotle is speaking here of the quiddity of a coincidental mode of being, which is preferable to that which is not this mode itself, but is merely affected by it, while being itself something else.<sup>113</sup> It is unclear whether this commonplace is of Platonic origin, meaning that justice should be taken to be the Platonic Form, Justice, not its instantiation, the being-just found in a particular man.<sup>114</sup> This much seems to be certain that the phrase τοῦ δικαίου cannot be taken to refer to the Platonic Form, \*The Just, since to oppose two transcendent, equally perfect Forms under the aspect of desirability would be rather unexpected.

Anyhow, what is contrasted here is a coincidental mode's quiddity — whether Platonically transcendent or taken in its immanent status,<sup>115</sup> or immanent in the Aristotelian sense — with the instance in which it is enmattered. *Pace* Waitz (II, 465) and others, the phrase 'what is not in the genus' does not refer to a coincidental mode of being ('accident'), but to something subsistent underlying it; accordingly, the commonplace is not about the genus being preferable to the accident:

*Top.* III 1, 116a23-28: Next, that which is precisely this particular <and as such preferable> is preferable to that which does not fall within its genus, for example, justice to a man who is just. For the former falls within the genus 'good', whereas the latter does not, and the former is quidditatively good (ὅπερ ἀγαθόν), whereas the latter is not. For nothing which does not happen to fall within the genus in question is called precisely after this generic mode of being,<sup>116</sup> as e.g. the pale man is not what precisely is a colour (ὅπερ χρώμα). And so likewise in the other cases.<sup>117</sup>

In the subsequent lines Aristotle's use of the phrases καθ' αὐτό and κατὰ συμβεβηκός seem to throw some light upon his view of

<sup>113</sup> A similar use of this idea is found at *Top.* III 5, 119a16-19, where it is claimed that what naturally has a certain property has it in a greater degree than that which does not possess it by nature; and if one thing does, and another thing does not, impart a certain quality to that which possesses it, or in which it is present, then whichever does impart it is of that quality in a greater degree than the one which does not impart it; and if both impart it, then that one possesses it in a greater degree which imparts it in a greater degree.

<sup>114</sup> The line 119a19 (previous note) may quite well be understood in terms of Platonic ontology.

<sup>115</sup> The immanent status of Platonic Forms is discussed in De Rijk (1986), *passim*.

<sup>116</sup> Note that γένος = 'generic mode of being'.

<sup>117</sup> Cf. 116b10-11 and 117b10-12. Tricot wrongly claims (*ad loc.*) that Waitz's interpretation is supported by Alexander CAG II-1, p. 227<sup>12-13</sup>, where Alexander correctly observes that Aristotle does not have any opposition of genus to accident in mind.

friendship and enmity. The claim (116a31-35) that what is in itself worthy of choice is preferable to that which is so by coincidence is remarkably instanced thus: 'that-your-friends-are-just' is preferable to 'that-your-enemies-are-just', because the former is desirable in itself, while the latter is so coincidentally; for we wish our enemies to be just not as such, but merely towards us, coincidentally, that is, in order that they may not do *us* harm. But that our friends should be just is a thing we choose for its own sake, because 'to be just' essentially belongs to 'being a friend'. This is what we desire, even if our friends' justice is not going to affect us at all, and even though they may live in India.

In the sixth chapter of Book III Aristotle deals with the proofs from quantified or indeterminate subjects. As for the proofs from or to universal states of affairs, he starts (119b35-120a5) with the reasoning that proceeds from supposing (ἐξ ὑποθέσεως) that if an attribute belongs or does not belong to one member of a genus, the same holds in like manner (ὁμοίως) of all its members. For example, if the soul of man is immortal, so are other souls as well; and if this one is not so, neither are the others. A similar proof proceeds from the assumption that man's soul is not immortal. On the face of it, such a proof from one particular to all members of its genus is not valid. Therefore Aristotle emphasizes the fact that the supposition is of a special nature. In his words: "Evidently, he who makes the supposition (ὁ ὑποτιθέμενος) universalizes the problem sentence whereas it is stated in a particular form; for he demands that when admitting the sentence in its particular form, we should admit it universally, inasmuch as he postulates (ἄξιόι) that if an attribute belongs to one member of the genus it belongs in a like manner to all".

Of course, this procedure is not just based upon a mere arrangement between the defender of a thesis and his opponent to the effect that if the former succeeds in proving his thesis for one particular case the opponent is obliged to admit it universally. What Aristotle has in mind is the proof that if the attribute falls to some member of a class qua member, it must belong to all members of that class. So the key word is ὁμοίως, meaning that the attribute should belong in a like manner to the one member under examination and the others.<sup>118</sup> What the like manner comes down to is made clear by the operational definition of the supposition procedure, where it is said

<sup>118</sup> Similarly the οὕτως of 120a2 emphatically determines the infinitive ὑπάρχειν, not the finite verb ἀκολουθήσει.

to consist in universalizing (καθ' ὅλου ποιεῖν). To avoid any shadow of begging the question, the universalizing procedure must boil down to seeing (or showing) that the attribute falls to one member of the class commensurately (καθ' ὅλου), in accordance, that is, with its complete essence.<sup>119</sup> To see this entails seeing that it belongs universally (κατὰ πάντων or πᾶσιν).

Next the procedure is applied to problem sentences with indefinite (indeterminate; ἀδιόριστος) subject (120a6-20). When someone has said that pleasure is good (or is not good), without adding anything further, you likewise have to apply a καθ' ὅλου proof.<sup>120</sup> On the other hand, when the thesis is about a determinate subject (e.g. this particular pleasure of, say, eating), you have to show that goodness falls precisely to this particular pleasure, eating, not to others, such as drinking or walking (120a20-24). If the thesis is about one instance of pleasure alone, say, my drinking at this particular moment, there are three ways of overthrowing it, viz. by showing that (a) all pleasure, or (b) no pleasure, or (c) more than this one, is good (120a24-26).

The treatment of commonplaces about accident (a coincidental mode of being) is concluded with some general advice, which mostly seems to bear on the observation of particular instances (120a32-b6).

(1) It is useful to look at particular instances in which some attribute is said to be present or not to be present, in the same way as we have discussed concerning universal problem sentences.

(2) You must look within the genera, dividing them according to their species until you reach those that are not further divisible, in the way we have described before (II 2, 109b13-29). After you have supported your thesis by bringing forward numerous cases, you should demand of the opponent that he should give universal admission, or else to state a counter-instance (ἐνστάσις).

(3) In all cases in which it is possible to define the accident either specifically or numerically (i.e. by defining numerical instances), you must look and see whether perhaps none of the attributes under examination are present — for example, with reference to the thesis that time does not move and is not a kind of motion — by enumerating all the different kinds of motion. Similarly, too, you can prove that soul is not a number,<sup>121</sup> by showing through analysis that it

<sup>119</sup> In fact, this comes close to 'induction'. — For my reading the two words expression καθ' ὅλου instead of καθόλου see my sections 6.34; 6.71.

<sup>120</sup> Of course, an inductive proof concerning all possible instances will also do.

<sup>121</sup> Against Xenocrates (fragment 60 Heinze).

obtains of all numbers to be either odd or even; for if the soul is neither odd nor even clearly it is not a number.

Overviewing these pieces of advice it may be clear that they exhibit a mix of inductive and καθ' ὅλου argument. The disproof of Xenocrates's thesis about the soul, in particular, should be taken in terms of the καθ' ὅλου procedure, since an infinitude of numbers prevents a proof by induction.

### 5. 5 *The commonplaces related to genus and proprium (Top. IV-V)*

Books IV and V deal with genus and proprium. The main rule about genus is what in chapter 3 of *Cat.* is presented as the rule concerning the transitivity of the said-of relations in so far as genera and species are concerned (my section 4. 25): “the genus is said of everything which falls under the same species” (120b19-20).

The most common error is to confuse genus and accident (since both have a said-of relation to the subject-substrate), and therefore it is of major importance to look and see if there is a quidditative (ἐν τῷ τί ἐστι) assignment, or merely one based on a coincidental mode of being, in the manner in which ‘the white’ <thing> is said of snow or ‘that which is self-moved’ of the soul.<sup>122</sup> This distinction is far-reaching; for neither is snow what precisely being white is (ὅπερ λευκόν), and therefore <the property> ‘what is white’ is not the genus of snow, nor is the soul what precisely being in motion is. ‘What is white’ does not indicate the quiddity of snow, but a certain quality. The same holds good of ‘being in motion’: it does not signify a thing’s what-ness (‘quiddity’), but rather indicates it as doing something or having done something. So neither ‘being white’ nor ‘being in motion’ are said of things quidditatively (120b21-29).<sup>123</sup>

#### 5. 51 *Further implementations of the transitivity rule*

The remainder of chapter 1, together with chapter 2, are devoted to a further implementation of the aforesaid transitivity rule. This implementation bears on the mutual inferential relationships between genera and species, including the position of the differentia.

<sup>122</sup> Plato, *Phaedrus* 245E.

<sup>123</sup> Throughout this passage, and all similar ones as well, the semantic Main Rules, RMA and RSC about the ambivalent uses of phrases such as τὸ λευκόν come to the fore. See my section 1.71.

The first rule (120b36-121a9) is that the genus and the species should be in the same categorial cluster.<sup>124</sup> Thus it is because 'being white' is not a subsistent mode of being, but a qualitative one, that it cannot be the genus of 'being snow' or 'being a swan'. Likewise the genera of relational modes of being must be relative themselves — as e.g. not only 'being double' but also its genus, 'being multiple', is a relational mode of being.

This being stated some special rules underlying certain commonplaces can be codified, all of them useful in preventing us from mistaking incidental attributes for genera:

(1) Species partake of genera, not the other way round. The definition of 'partaking' (μετέχειν, of which we should notice the Platonic flavour) runs 'to admit the definiens of that which is partaken of'. You must therefore look and see if the genus assigned partakes, or at least can partake, of the species. For example, if your opponent were to erroneously render something as the genus of 'beingness' or of 'oneness', the result would be that this genus would partake of the species, for 'being' and 'being one' are said of everything that is, and therefore their definiens as well; 121a10-19.

(2) If the species is assigned the genus too will be assigned. Therefore it is impossible to render e.g. 'being' or 'knowable' as the genus of 'opinable' (δοξαστοῦ), for 'opinable' may also be attributed to what is not (τὰ μὴ ὄντα); 121a20-26.

(3) A certain mode of being cannot be placed in a genus if it partakes of none of its species;<sup>125</sup> individual instances of a mode of being are always found in both a genus and its species alike; 121a27-39.

(4) What is placed in a genus cannot have a wider extension (ἐπὶ πλεόν) than the genus; both the species and the differentia have a narrower application than the genus. Thus 'opinable' cannot be a species of 'being', since it has a wider application than 'being'. Aristotle's favourite notions, 'being' and 'one' are once again presented to illustrate this rule. Given that these two attributes accompany everything that is, one must not lay down one of them as a species and the other as a genus; 121b1-14.

(5) The genus of all things that are not specifically different is the same; 121b15-23.

(6) When one and the same species falls under two genera, these two

<sup>124</sup> The text has the Platonic formula (ἐν τῇ αὐτῇ διαίρεσει).

<sup>125</sup> Cf. 2, 122a26-27: "Of necessity what partakes of the genus also partakes of one of the species resulting from the first division of the genus".

must be subordinate (as 'man' falls under 'animal' and 'body'), or at least they must be subordinate both to the same superior genus, as e.g. in the case of virtue and knowledge, for both of them fall under the same genus, each of them being a state and a disposition (ἐξίς καὶ διάθεσις); ch. 2, 121b24-122a2.

(7) All superior genera (τὰ ἐπάνω γένη) within one of the categorial columns must be assigned quidditatively (ἐν τῷ τί ἐστὶ); cf. 6, 128a12-19. That this is true appears from induction, using the logical assessment of the coincidental mode of being ('walking') as a specimen; 122a3-30.

(8) The genus is quidditatively assigned to the things the species is said of; 122a31-b6.<sup>126</sup>

(9) The definiens of the genera must be truly said of the species, including that which partakes the species; 122b7-11; cf. VII 5, 154a36-b12.

(10) the differentia must not be assigned as a genus. E.g. 'immortal', being a differentia of the genus 'living creature', cannot be the genus of 'god'. In fact, a differentia of a thing is never its genus; for a thing's differentia never signifies its quiddity, but rather a sort of quality, such as 'footed' or 'two-footed'; 122b12-17.

(11) You must not place the differentia inside the genus, thus making it a sort of species.<sup>127</sup> E.g. 'odd' is a differentia of 'number', not a species; 122b18-24.

(12) Nor should the genus be placed inside the species, thus making the species more widely used than the genus; 122b25-36.

(13) The differentia must not be placed inside the species either, as taking e.g. the immortal as what precisely is god (ὅπερ θεόν). This would make the species be more widely applied than the differentia, while the differentia is always used in an equal number of cases as, or in a greater number of cases than, the species; 122b37-123a1.

(14) Nor should the genus be put inside the differentia, by taking e.g. colour as 'precisely that which is compressive', or number as 'precisely that which is odd'; 123a1-2.

<sup>126</sup> Cf. *Top.* VI 6, 144a32-36: "The general view is that the genus is said, not of the differentia, but of that which the differentia is said of. Animal, for instance, is said of man and ox or other terrestrial animals, not of the differentia itself which is said of the species".

<sup>127</sup> Ross's text has followed the Parisinus Coislinianus and Alexander's lemma in adding ὡς εἶδος ('qua species' or 'as though it were a species'). It makes good sense, but is not found in the Marcianus nor in the Parisinus 1843 or the Basiliensis 54 (F II, 21).

(15) Nor should the genus be stated as a differentia, for, then, the genus will have a narrower range of application than the differentia and seem to partake of it; 123a3-10.

(16) If no differentia of the genus can be assigned to the species the genus cannot be said of it either; 123a11-14.

(17) The genus is naturally prior to the species and destroys the species along with itself;<sup>128</sup> 123a14-15.

(18) The genus and the differentia cannot be absent from the species; for they attend the species as long as it exists. Thus if it is possible for being in motion to be absent from the soul, or being true and false from opinion, neither of these could be the genus or the differentia of soul and opinion, respectively; 123a15-19.

(19) What is placed in the genus cannot partake of anything contrary to the genus; ch. 3, 123a20-23.

(20) The species cannot share in any mode of being which cannot possibly belong to anything that falls under the genus. Thus if the soul has a share in life, while it is impossible for any number to live, the soul cannot be a species of number; 123a23-26.

(21) Every genus is said of its species synonymously; 123a27-29; cf. ch. 6, 127b5-7.

(22) Of every genus there is more than just one species; 123a30-32.

(23) Every genus is said of its species in its proper sense, not metaphorically, that is; 123a33-37.

In addition, a great number of commonplaces are presented, which are based upon the examination of contraries (123b1-124a9), inflexions and co-ordinates (124a10-14), and similarity of mutual relationships (ch.4, 124a14-125b14).

Chapter 5 deals (125b15-127a19) with some common errors concerning the assignment of appellations, part of which correspond with some of the aforesaid rules about the inferential relationships between genus, species, and differentia.<sup>129</sup>

## 5. 52 *Various additional rules for identifying genus and differentia*

The final chapter of Book IV discusses various rules which are follow-ups to what we were told in the previous discussions. See e.g. the remark on the twin notions 'being' and 'one' at 127a26-34.

<sup>128</sup> Cf. *Met.* K 1, 1059b27-31, talking about the natural priority of being and one.

<sup>129</sup> Cf. e.g. 126b35ff. with II 2, 109b5ff.

There is an interesting remark (128a20-29) about people who hold that the differentia is said of the species quidditatively. On this understanding of the nature of the differentia, the genus must be kept well apart from the differentia by applying the aforesaid elementary starting-points, namely (1) that the genus has a wider extension than the differentia; (2) that in rendering a thing's quiddity (κατὰ τὴν τοῦ τί ἐστὶν ἀπόδοσιν), it is more appropriate to state the genus than the differentia; for by calling a man 'animal' you will indicate his quiddity better than by calling him 'pedestrian'; and (3) that the differentia always indicates a qualification of the genus, not the other way round; for when using 'terrestrial', you are speaking of a certain sort of animal, whereas saying 'animal' you do not talk of a certain sort of terrestrial.

The Book winds up with some practical instructions (128a30-b9). The first one concerns the use of the qua-functor (or ᾗ-functor) for the identification of genuine genera. The text presents an illustration of the use of the ὅτε device at the same time:

*Top.* IV 5, 128a31-37: It is generally held that, if that which is educated, inasmuch as (ᾗ) it is educated, possesses a certain kind of knowledge, then also education is a kind of knowledge, and that, if that which walks is in motion by the very fact that it is walking, then walking is a kind of motion. Therefore you should examine in the aforesaid manner any genus in which you wish to confirm the position of something. For example, if you wish to confirm that something is a form of knowledge precisely qua conviction, you must look and see whether the man who knows, inasmuch as he knows, has a conviction; for then clearly knowledge would be a kind of conviction.

### 5.53 *The assignment of propria*

In the opening part of Book V, Aristotle explains that a thing's proprium — which is a mode of being that, while not disclosing a thing's quiddity, falls to it alone and is convertible with it, as e.g. a man's proprium is his being capable of learning grammar, so that the designations 'man' and 'entity capable of learning grammar' are convertible<sup>130</sup> — is rendered either essential, i.e. in virtue of its own being, and permanently, or related to some other thing and temporarily. An essential proprium of man is his being a naturally civilized animal; a relative proprium of his is that, in relation to a horse, he is

<sup>130</sup> *Top.* I 5, 102a18-22.



two-footed. An example of a permanent proprium is that of a god as 'an immortal living being' (ζῶον ἄθάνατον); of a temporary proprium, that of a particular man as 'walking in the gymnasium', supposing, that is, that at a certain period of time he is the only one doing so.<sup>131</sup> Thus an essential proprium is one which is attributed to something in contrast to everything else (i.e. everything of a different nature) and sets a thing apart from everything else. A relative property does not mark off a thing from everything else but from something fixed. A permanent proprium is true at all times and never fails, whereas a temporary proprium is only true at a particular time and does not of necessity always follow (128b34-129a5).

In the remainder of the Book (chs. 2-9) a great number of rules are presented, which all follow from the aforesaid assessments.<sup>132</sup> Some of them should now be given due attention.

A thing's proprium is correctly rendered only if this thing is brought up quidditatively; for in the case of a proprium, as in that of a definiens, the first thing to be rendered must be brought up as genus, and then the other determinations should be appended, to mark off the substrate from other things falling under the same genus. So you must bring up the substrate whose proprium you are rendering, quidditatively, and then append the rest. For example, when rendering as a man's proprium his being an animal 'that is capable of acquiring knowledge', you have rendered it by appending it to the substrate's quidditative mode of being (viz. its being an animal), and so the proprium of man would in this respect have been correctly stated. But whoever has given as an animal's proprium 'having a soul' has not first brought up the animal quidditatively, viz. by placing it in its superior genus, say, e.g. 'being a corporeal entity' (σῶμα), and so the proprium would not be rendered in the appropriate formula.<sup>133</sup>

The proprium must be true of every instance and apply inasmuch as the latter is of this or that generic nature (κατὰ τοῦτο). Thus the determination 'being an animal susceptible of knowledge' is true of every man *qua being a man*, not in any other capacity of his (ch. 4, 132a27-b3).

<sup>131</sup> *Top.* V 1, 128b16-25. It is hardly thinkable that someone's walking about in the market-place (129a4-5) could be a proprium of his.

<sup>132</sup> Some rules have an unmistakably Platonic flavour; e.g. V 7, 137b3-13; similarly, at II 7, 113a24-32; VI 6, 143b23-32; 8, 147a5-11; 10, 148a14-22; VII 5, 154a18-22.

<sup>133</sup> *Top.* V 3, 132a10-21. Cf. Alexander CAG II-2, p. 388<sup>18-19</sup>.

In the case of some one thing signified by an expression conveying its being affected by a coincidental mode of being, there is a peculiar difficulty. Will what is a proprium of 'man', for example, also be a proprium of 'pale man'? Aristotle (133b15-134a4) tackles this problem starting from the preliminary question if 'man' is the same as 'pale man'. Clearly the question concerns the distinction between extensional (referential) and formal identity,<sup>134</sup> which is momentous throughout Aristotle's metaphysical investigations as well. The attribute that belongs to a substrate to which an accident is attached, will also belong to the substrate including the coincidental mode of being. E.g. what belongs to 'man' will also belong to 'pale man' if there should be a pale man, and what belongs to 'pale man' will also belong to 'man'. A sophistical opponent, then, may discredit the majority of proprium assignments, by making the substrate when taken by itself (τὸ ὑποκείμενον καθ' αὐτό) one thing, and when taken including the accident, something different (e.g. 'man' and 'pale man') — and, further, by making a (closely related) difference between the state (e.g. 'being pale') and that which is designated after this state ('pale man'). Aristotle claims (133b31-36) that what the coincidental mode of being belongs to is not different from this mode taken together with its substrate in an unqualified sense, and is only called 'something different' because the mode of being of the two is different.

The aforesaid formal difference is explained by Aristotle by pointing out that it is not the same thing for a man to be a man and for a *pale* man to be a *man* who is pale. The translators (Pickard-Cambridge, Forster, Tricot, Zadro) all ignore the striking difference in word-order at 133b35-36, where all our MSS first read λευκῷ ἄνθρωπῳ and then ἄνθρωπῳ λευκῷ. This contrast should be explained, I guess, in accordance with what we have learnt from *Int.*, ch. 10, about the differences involved in diversely focussing on the components of phrases such as δίκαιος ἄνθρωπος ('just man') when negating them, such that the expression 'not: [just man]' may stand either for 'a man who is not just' or 'a just who is not a man'.

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<sup>134</sup> "Since 'same' and 'different' are used in more than one sense"; 133b15; cf. *Met.* Δ 9. Also *Top.* I 7.

5. 6 *The correct statement of a thing's definiens (Top. VI-VII, chs. 1-3)*

To correctly state a thing's definiens, it has to meet at least the following four requirements (139a24-35):

(1) The definiens must apply to the thing under examination as well as the name does, meaning that it must hold of every instance of what is conveyed by the name (139a26-27: "for the definiens of 'man' must be true of every man").

(2) A thing's definiens should be put into the thing's proper genus; for he who defines something must put the substrate into its genus and then append the differentiae, since it is the genus which seems most of all to indicate the definiendum's quiddity (139a27-31).

(3) The definiens must be peculiar to the definiendum (139a31-32).

(4) The definiens must precisely apply to what we wish to define. On the face of it, Aristotle's words indicating the problem situation may come as a surprise: "If, though one has satisfied all the aforesaid requirements, there has not resulted a definiens" (139a32-35). The following  $\mu\eta\delta$  (at a33) must be taken explicatively in that the subsequent sentence explains in what respect the given definiens falls short, viz. in that it fails to give the quiddity of what precisely is the intended<sup>135</sup> object of the definition. Aristotle is talking here, I take it, about the definition of, say, 'the *pale* man', in which the property 'being pale' ('paleness') is focussed on, not 'manhood'.

Incorrectness of definition is said (139b12-18) to fall into two groups: (a) the use of obscure language, which does not help to make the thing better known; and (b) the use of a definiens which is too long because of superfluous elements. Obscure language arises from equivocity (ch. 2, 139b19-31), from speaking metaphorically (139b34-35: "what is metaphorically expressed is without any exception obscure"), or from using unfamiliar words, like Plato comicus does, who calls the eye 'brow-shaded' and the poisonous spider 'bite-mortifying'; for unusual words are always obscure.

Likewise redundancy should be avoided (ch. 3, 140a24-141a22). An interesting case of redundancy is saying the same thing more than once or babbling ('nugatory'). For instance, if you call 'desire' an 'appetite for the pleasant', you are babbling, for all desire is for the pleasant, so that in fact you are defining desire as an 'appetite-for-the-pleasant for the pleasant'.

<sup>135</sup> I take the present participle to be used *de conatu*.

Or, perhaps, there is no absurdity here, Aristotle then suggests (140b31-32). For take this instance: a man is a biped; hence that which is the same as 'man' will be a biped; now 'pedestrian biped animal' is the same as 'man'; therefore a terrestrial biped animal is a biped. But that there is no absurdity here is explained by drawing the fundamental distinction between sentence predication (or attribution) and appellation (designation). He points out that 'being a biped' is not said of biped animal — then, indeed (γάρ), 'biped' would be said twice of the same thing — but 'biped' is used in the designation concerning (περί)<sup>136</sup> something which is a terrestrial biped animal, so that 'biped' is only said once. Likewise in the case of 'desire' the appellation (κατηγορία) occurs only once (140b32-141a14).<sup>137</sup>

In the subsequent chapters the correct procedure for stating a thing's definiens and marking it off from genus, differentia, proprium, and accident is explained and codified in rules and commonplaces, in line with the foregoing observations (chs. 4, 141a23-14, 151b23). The genus and differentia are given ample attention, because they are the two components of a genuine definiens; while the proprium and particularly the accident are frequently taken into consideration as the two items from which the definiens must be well marked off.

Chapter 9 contains an interesting remark (147a23-28) on the correct description of relational modes of being (ἐπὶ τῶν πρὸς τι). In dealing with these modes of being, Aristotle says, you must examine whether the species (being the proper object of the definition) is rendered as related to a species of that to which the genus is rendered as related. For example, if assumption (ὑπόληψις) is related to what is assumed you must look and see whether a particular assumption is <rendered as> related to a particular object of assumption; for if this is not the case, clearly a mistake has been made. This is in keeping with Aristotle's other observations about the assignment of relational modes of being.<sup>138</sup>

Another rule (ch. 11, 148b33-149a4) requires that, when the definiendum is compound (συνπεπλεγμένον), you must look and see whether the definiens rendered is equimembral (ἰσόκωλος) with the

<sup>136</sup> For this use of περί see my *Index*.

<sup>137</sup> Compare the pseudo-problem of self-predication of the Platonic Forms; De Rijk (1986), 316-22.

<sup>138</sup> *Cal.* 7. Compare what he has said before (147a12-22) about the definition of a state and that of its possessor.

definiendum. The definiens meets this condition if the names and attributes (ῥήματα) occurring in the definiens are equal in number to the component parts of the compound notion signifying the object under examination. Thus, grammatically speaking, e.g. the three parts of the compound notion, 'finite straight line' (γραμμὴ πεπερασμένη εὐθεΐα),<sup>139</sup> viz. the noun, 'line' and the attributes, 'finite' and 'straight', must each be properly defined in the compound definiens, such that 'line' is defined as 'limit of a plane', 'finite' as, say, 'having no boundaries',<sup>140</sup> and 'straight' as 'such that its centre is directly between its extremities'.<sup>141</sup> This procedure is called μεταλλαγή in the passage, meaning the 'exchange' of the nouns<sup>142</sup> for their matching parts of the definiens, whereby "he who is framing a definiens must render the nouns by phrases, if possible each one of them, or at least most of them". The exchange of nouns by phrases is obligatory, Aristotle says, as it also is in defining simple terms; otherwise, 'mantle' (λῶπιον) could be defined as 'cloak' (ἱμάτιον).

A criterion (149a38-b3) for rejecting a definiens concerns its ontic consistency, i.e. the congruity of its parts. So 'what is white' cannot be defined as 'being a colour mixed with fire'; for while what is white is something real, 'what-is-a-colour-mixed-with-fire' is not, since it is impossible for something without body to be mixed with a body. The requirement for the definiens to be of things-that-are (τῶν ὄντων) does not concern real existence, but intelligibility, the counterpart of ontic absurdity.

As for defining composites (ch. 13, 150b22-26), to state the manner of the composition (σύνθεσις) is imperative; for the mere mention of a thing's being composed of this *plus* that is not enough to make the matter clear.<sup>143</sup> The reason for this is, Aristotle says, that the ousia of each compound is not just that it is made up of this *plus* that, but that it is made up in such and such way, just as with a house; for this and that material put together in any old way does not make a house. In Aristotle's final doctrine of the form being the true ousia

<sup>139</sup> This example of composites (συμπεπλεγμένων) is used in the previous passage (148b23-32).

<sup>140</sup> The definiens of 'finite' is missing in the previous passage.

<sup>141</sup> In 148b30-32 this part of the definiens is rejected because it does not hold of an infinite line.

<sup>142</sup> As often (e.g. *SE* 165a7-13), the word ὄνομα is here loosely used to stand for 'word'. Liddell & Scott, s.v. VI; Bonitz, *Index*, 515a55-61. — Incidentally, the context of the passage proves that ῥήμα stands for 'attributive determination', not our 'verb'; my section 3.28.

<sup>143</sup> Also *Top.* VI 14, 151a20-26.

as put forward in the central books of *Met.* this idea will gain philosophic depth.

The first three chapters of Book VII discuss some items which bear upon correctly stating a thing's definiens. One of these is the pair 'the same' vs. 'different', two notions that are important in order to see whether the definiens means the same thing as the initial expression conveying the definiendum, or something different. It is said (151b28-36) that to identify numerical or extensional sameness, one should examine the terms concerned in the light of their inflexions, co-ordinates, and opposites. This method is first applied to an exchange of simple terms, such as that of 'justice' and 'courage'. If the exchange is valid, then 'just man' equals 'courageous man', and 'justly' 'courageously', as their opposites too must be exchangeable. A similar procedure obtains for compounds (152a5-10), e.g. when Xenocrates tries to show (Fr. 82 Heinze) that the happy life and the good life are the same thing, since of all lives the good life and the happy life are most worthy of choice; for 'the most worthy of choice' applies but to one thing. Xenocrates fails to prove his case; for the happy life and the good life do not form a numerical unity, so that it does not follow that because they are both the most worthy of choice, they are therefore the same life; it only follows that one is subordinate to the other.<sup>144</sup>

The sameness of things can be put to the test in many other ways (152a31-ch. 3, 153a6). For example, by looking to see if they each are the same as a third, or whether their accidents are the same, and, in general, whether they behave the same way in similar circumstances, such as in admitting increase of degree. By the last criterion, you can prove that love and the desire for intercourse are not the same thing, since he who is more intensely in love does not therefore have a greater desire for intercourse (152b6-9).

An important test (152a38-b5) is to see whether the things under examination (i.e. those signified by the initial terms and the ones conveyed by the definiens) both fall under one and the same categorial mode of being (ἐνὶ γένει κατηγορίας; 'the same type of designation'), and have the same differentiae.

In chapter 3 some rules are presented for correctly framing a definition and testing its correctness (153a6-154a11).<sup>145</sup> Finally, the

<sup>144</sup> *Top.* IV 2, 121b24-122a2.

<sup>145</sup> At 153a6-24 Aristotle seems to claim that it is possible to 'prove' a definition. Consequently, Maier (II 2, 78, n. 3), who was followed by others (among them

chapters 4 and 5 contain general remarks about the value of rules and commonplaces. (1) Definitions are more easily overthrown than established (ch. 5, 154a23-b12); (2) The same goes for genus and proprium (154b13-32); (3) A coincidental mode of being is more easily overthrown if it is rendered universally, and more easily established if it is rendered for a particular instance (154b33-155a2); (4) The definiens of all things is the most easy to overthrow, and the most difficult to establish (155a3-22); (5) The proprium comes next to the definiens in these respects (155a23-27); (6) Incidental modes of being are the most difficult to overthrow and the easiest to establish (155a28-36).

### 5. 7 *The practice of dialectics (Top. VIII)*

In the introduction to Book VIII Aristotle announces that he will speak about the problems of arrangement and the way to ask questions. First of all one must select the ground from which to make the attack; secondly, formulate and arrange the questions one by one in one's own mind; and, finally, proceed to put them to somebody else. As far as the selection of the ground goes, the philosopher and the dialectician are making a similar inquiry, but the arrangement of the material and the framing of questions are the proper domain of the dialectician: for such a proceeding is entirely directed to others. But the philosopher and person who is investigating by himself does not care if the answerer rejects his premisses, even though they are true and familiar, because they are too close to the initial thesis and he foresees what will result from his admission. Indeed, the philosopher may even perhaps be eager to ensure that his prerequisites (ἀξιώματα)<sup>146</sup> are as familiar and as near to his starting-point as possible: for it is from these that epistemonical reasoning takes its start (155b3-16).<sup>147</sup>

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Solmsen, *Die Entwicklung der aristotelischen Logik und Rhetorik*, Berlin 1929, 181f.) claimed that the view in *Top.* contradicts the one argued for in *APo.*, where this is explicitly denied. Harold F. Cherniss has convincingly shown (*Aristotle's Criticism of Plato and the Academy*, I. Baltimore 1944, 34, n. 28) that the view held by Maier and Solmsen is untenable. See also my sections 6.53-6.57.

<sup>146</sup> Including both primary concepts and primary theorems ('axioms').

<sup>147</sup> Smith (1997, 104-64; 182-85) comments extensively on Book VIII. — Rehn (2000, 71-9) rightly emphasizes the importance of dialectics in Aristotle, but seems (71) to ignore the extensive studies by Zadro (1974) and Smith (1997) on the *Topics*.

5. 71 *How to frame and arrange questions (Top. VIII, chs. 1-3)*

Premises divide into necessary ones and others that serve rather less strict purposes, unnecessary as they are for the development of the reasoning taken strictly. The necessary steps should be prepared by previous reasonings or inductive arguments, so as to avoid the possibility that the adversary, when directly confronted with your final conclusion, will refuse to admit it. The unnecessary premisses are to be used (1) for the sake of induction, so that the universal thesis may be granted, or (2) to lend weight to the argument, or (3) to conceal the final conclusion — by postponing it for as long as possible, or varying the arrangement of your arguments, or proceeding to indirect argument from co-ordinate terms or similes, or making objections to oneself, or irrelevant amplifications — or (4) to give more lucidity to the argument (155b3-157a17).

The reader is warned (ch.2, 157b34-158a2) not to use the argument *per impossibile*. If one is proving (ἀποδεικνύντι) and not arguing dialectically there is nothing against the argument *per impossibile*. In dialectical arguments, however, the conclusion arrived at by this argument could still be open to debate, since the adversary may say that there is no impossibility at all.

5. 72 *How to answer questions (Top. VIII, chs. 4-10)*

Chapter 4 sketches (159a15-24) the different roles of the opponent and the respondent. The opponent's job is to direct the discussion in such a way as to force the respondents to give the most paradoxical replies that inescapably follow because of his thesis; while that of the respondents is to make it appear that the impossible or paradoxical is not his personal fault but entirely due to the thesis. No doubt (ἴσως), to lay down the wrong initial thesis is a different kind of mistake from failing to maintain it properly, once it is taken up.

Chapter 5 opens (159a25-37) with a remark about the lack in Aristotle's day of definite rules for discussion. They are badly needed and cannot be codified off the cuff, for the needs are quite diverse. Those who teach or learn and those who compete with one another have different purposes and the aim of the latter differs from that of those who discuss things together for the sake of inquiry; for one should always state probable things to somebody who tries to learn something, because no one undertakes to teach someone what is false. On the other hand, when people are competing with one



another, the opponens must by some means or other appear to score, while the respondens must make the impression to be unaffected by him. But as for meetings held for serious discussion, for the sake of experiment and inquiry, no formal rules have been laid down as yet, teaching the respondent how to proceed in order to maintain his thesis properly. Given this lack of didactic tradition, let us try to say something on the subject ourselves, Aristotle modestly proposes.

In the subsequent lines he goes on to elaborate on the subject. The main task of the respondent is to concede or to refuse to concede what has been proposed to him as a counter-thesis by the questioner (τὸ ἐρωτηθεῖν), doing so irrespective of the nature of his own thesis, be it generally accepted or rejected or neither generally accepted nor rejected: for the degree of acceptance or rejection makes no difference at all (159a38-b35). The exposition is interspersed by remarks about the task falling to the opponens, in accordance with the nature of the thesis proposed by the respondens; his counter-thesis will equally oscillate between general rejection and general acceptance.

As far as the particular question by which the opponens attacks the initial thesis of the respondens is concerned, this must be about a generally accepted position, which does not admit of objection or counter-argument. It must also be asked clearly and unequivocally, to prevent the respondens from frustrating the procedure by saying 'I don't understand' (chs. 6-8).

In chapter 9 a rundown is given of the answerer's task (160b14-22). Before he upholds a thesis or defends the correctness of a given definiens, he should put them to the test by arguing against them by himself. To be a good answerer, put yourself in the position of the opponens and see what you would do.<sup>148</sup> The respondens should beware of upholding a thesis which is generally held as disgraceful (ἄδοξος).<sup>149</sup> This would be the case either if the thesis must lead to absurdities — e.g. a thesis running 'everything is in motion' or 'nothing is in motion' — or if it is of the disgraceful kind bad guys like to defend, e.g. 'pleasure is the Good' or 'to commit injustice is better than to suffer it'. For people then hate him, supposing him to maintain them seriously, not for the sake of argument.

In chapter 10 Aristotle goes on to teach (160b23-161a15) the respondens how to solve fallacious arguments produced by the

<sup>148</sup> Smith (1997), 136.

<sup>149</sup> For the whole paragraph see Smith (1997), 136f.

opponens. The general rule is not to demolish any chance point (however false it might be) of the man's argument, but to pick out the relevant point. For example, the false reasoning 'he who is seated is writing; Socrates is seated; therefore, Socrates is writing' will not be demolished by defending the (in the mean time) true position that Socrates is not seated at all, since this does not bring us any nearer to a solution of the argument as such. The relevant point is the falsehood of the statement 'he who is seated is writing' (160b23-39); for it is first meant as 'The seated one over there is writing', and then is taken in the sense of 'Whoever is seated is writing'. Aristotle claims that this is the point from which the falsehood arises (160b23-24).

That this is the formal point Aristotle has in mind is clear from his using the phrase *παρ' ὃ γίνεται τὸ ψεῦδος*, lit. '*the road along which the falsehood arises*'.<sup>150</sup> Therefore it will be of no use either to demonstrate *ad oculos* a person who happens to be seated without writing (161b30-32). This false attempt at a solution can be compared to what is termed 'the fallacy of giving what is not the cause as the cause' in *SE* 5, 167b21-36 and *APr.* II 17, 65b13-40.

Next the author presents the four possible ways of preventing someone from bringing his argument to a conclusion (161a1-15): (1) to demolish that on which the falsehood depends, (2) to prevent the opponens from pursuing his argument by making an objection directed against him personally, (3) to make an objection against what is asked by him. The fourth and worst kind of objection is (4) that which relates to the time available for the discussion; for some people bring forward objections that take longer to deal with than the discussion at hand allows.

### 5. 73 *On bad dialectical practice and how to react (Top. VIII, 11)*

In chapter 11 Aristotle proceeds to state various points concerned with the type of arguments, the procedure actually followed, and the disputants' behaviour.<sup>151</sup> They may be summarized as follows:

(1) Often the person questioned is to blame for the argument not being properly discussed, e.g. because he just refuses to say 'I concede'. So at times it is unavoidable to attack the speaker, and not

<sup>150</sup> Compare the use of *παρά* at 160b30: οὐ παρὰ τοῦτο ὁ λόγος ψευδής. Smith's rendering 'that because of which' lacks precision.

<sup>151</sup> Smith (1997), 138-46.

his thesis. By behaving peevishly, people make their discussions contentious instead of dialectical (161a16-24).

(2) Since dialectical arguments are carried out for the sake of practice and experiments rather than instruction, clearly people must argue to establish not only the truth but also the falsehood, sometimes even by means of what is false. Thus the argument *ex falsis* is sometimes allowed (161a24-33).

(3) Still the rules of the dialectical game should be observed. Whoever seeks to convert another to a different opinion in a proper manner ought to do so in a dialectical and not in a contentious way, just as a geometrician reasons geometrically, no matter if the conclusion aimed is false or true. In this light both the opposers and the respondents may turn out to be bad dialecticians (161a33-b10).

(4) Arguments may be vitiated by the respondent admitting points of minor importance (e.g. by inconsistent behaviour concerning contrary statements), and because he, while refusing to concede the major points, generously concedes the aforesaid (τοιαῦτα) points of minor importance (161b11-18).

(5) The argument in itself is open to criticism (ἐπιτίμησις) in five possible ways: (a) if bad premisses lead to nothing, (b) if good premisses are not applicable to the thesis, (c) if certain premisses additionally adduced are weaker than the original ones or less generally accepted than the conclusion, (d) if one has assumed some superfluous premisses, and by withdrawing them the reasoning could proceed — cf. (9) below — and (e) if the premisses should be less generally held and less credible than the conclusion, or if, though true, they require more labour to prove than the initial problem sentence itself (161b19-33).

(6) An argument should be criticised not in itself, but for its relevance in regard to the thesis proposed. Thus with those who bring about a true conclusion by means of false premisses, it is not fair to find fault; for a true conclusion may sometimes be drawn from false premisses (161b34-162a11).<sup>152</sup>

(7) A note is interspersed about the different sorts of inference, among which there is the σόφισμα or what merely appears to be a 'scientific' proof (ἀπόδειξις). The reasoning, then, turns out to be either (a) a φιλοσόφημα or scientific reasoning, or (b) an ἐπιχείρημα or dialectical reasoning, or (c) a σόφισμα, being a contentious

<sup>152</sup> A reference to *APr.* (II 2, 53b26-55b2) is added.

reasoning, or an ἀπόρημα, being a dialectical reasoning leading to a contradiction (162a12-18).

(8) Conclusions that follow from premisses with unequal degrees of acceptance may also be of different degrees of acceptance themselves (162a19-23).

(9) There is also an error if the process someone uses to prove something is longer than necessary. It occurs when someone broadly develops his argument, but fails to indicate the ground on which it rests. Aristotle's exemplification has a Platonic flavour. Suppose a man who intends to prove that one opinion is more acceptable than another claims that one opinion is more an opinion than another, postulating, with Plato, that something like a Thing-itself (αὐτοέκαστον) exists, hence also an 'Opinion-itself' (αὐτοδόξα). But he sets out to prove the latter by postulating its correlative, viz. the 'Thing-itself truly opined' (δοξαστὸν ἀληθῶς αὐτό), so he argues in a roundabout way by amplifying the argument with his rigmarole about the correlative entity 'Thing-itself-truly-opined'. By doing so, however, the man is concealing the proper ground of his argument, viz. the Platonic assumption of such entities as 'Opinion-itself' (162a24-34).<sup>153</sup>

#### 5. 74 *On clarity vs. fallaciousness of arguments* (Top. VIII, 12)

An argument is clear (in the most usual sense) if all conclusions necessarily follow from the premisses, even if steps from all too obvious opinions are omitted (ch. 12, 162a35-b2). An argument is called fallacious in four senses: (a) when the conclusion is merely a seeming one, the so-called contentious reasoning, (b) when the argument does reach a conclusion, but not the proposed one — this mainly happens in the case of a reductio ad impossibile, (c) when a conclusion, however true, is obtained, but not by the appropriate method, e.g. when a non-medical argument passes for a medical one, or a non-dialectical one for a dialectical one, and (d) when the conclusion is obtained from false premisses, even if it is, none the less, true<sup>154</sup> (162b3-15).

Arguments should be tested in a threefold manner. The first thing to look for in an argument itself is whether it is really conclusive, the second, whether its conclusion is true or false, and the third, from

<sup>153</sup> The argument should be compared to the famous argument in *Phys.* I 4, 188a17-18, which is commonly known as the ancestor of 'Ockham's razor'.

<sup>154</sup> Cf. 162a10-11.

what kind of premisses it is drawn. The last point bears on the nature of the argument. If the conclusion is reached from premisses which are false but generally accepted, it is still a logical argument; if from premisses which are true but generally rejected, it is a bad argument; whereas, if the premisses are both false and utterly improbable there can be no doubt that it is bad, either absolutely or with reference to the subject-matter at hand (162b24-30).

In this context, the qualification 'bad argument' is used rather loosely for arguments the contestants should not come up with, regardless of their formal validity or invalidity. Strictly speaking, the fact that the argument's conclusion is true or false has as such nothing to do with its validity: it is always the formal point that counts. This pivotal requirement is alluded to, though not explicitly dealt with at VIII 14, 163b17-33, where the dialectical skill appears not so much to consist in having a stock of various argument available as in mastering the inferential force of arguments built upon a certain *τόπος*.

#### 5. 75 *On begging the question (Top. VIII, 13)*

After referring to his exposition in *APr.*, where he has explained (II 16, 64b28-65a37) — according to the true nature (*κατ' ἀλήθειαν*) of this procedure — how the questioner may beg what is posited in the initial question and also beg contrary dictums, Aristotle sets out now to describe how it looks on the face of it (*κατὰ δόξαν*).

There seem to be five ways of begging the original question (*αἰτεῖσθαι τὸ ἐν ἀρχῇ*). The first and most obvious way is when someone begs the very point that has to be shown; sometimes this escapes attention, when synonyms are used and the name and the definiens signify the same thing. A second way is when someone who has to prove something in a particular instance (e.g. 'there is one discipline of contraries'), begs it universally (by assuming 'there is one discipline of opposites'). A third way goes the other way round. Another way is when one divides the problem sentence up and begs its parts one by one. A final way is when people beg one of two dictums that necessarily follow one another, e.g. begging that the side is incommensurable with the diagonal, when he has to prove that the diagonal is incommensurable with the side (162b31-163a13). Likewise the begging of contrary dictums is possible (163a14-28).<sup>155</sup>

<sup>155</sup> Smith (1997), 150-2.

5. 76 *Various hints on training and practice in dialectical arguments (Top. VIII, 14)*

In the concluding chapter of the *Topics* Aristotle, with an eye on training and practice, presents various hints how to proceed in a dialectical disputation:<sup>156</sup>

(1) Accustom yourself to converting reasonings (ἀντιστρέφειν τοὺς λόγους), conversion being the taking of the reverse of the conclusion together with the other dictums involved in the questions, to then demolish one of the dictums conceded. For if the conclusion is not true one of the premisses must be demolished of necessity (163a29-36).

(2) Scrutinize all the arguments *pro* and *con*; this will give an excellent training both for the role of opposens and for that of respondens. Comparing and weighing the diverse arguments will strengthen your disputational skills (163a36-b16).

(3) Try to know by heart arguments dealing with problems of frequent occurrence, especially those concerning primary theses. The same holds for primary definitions; get a good stock of them, and have those of familiar and primary ideas at hand (163b17-33).

This should not be taken to mean, however, that you should have a stock of materials of various kinds at hand to be well equipped for any chance dispute of the sort presented in “the instructions given by those who taught contentious arguments for a fee, [...] to be committed to memory” (*SE* 34, 183b35ff.). Such instructions were “quick but without art” (*ibid.* 184a1-2). Therefore what really counts is the formal structure showing *how* the intended conclusion logically follows from a topical premiss. What is to be committed to memory is not a set of arguments proven to be successful, but a set of topical materials from which arguments can be framed, with an eye on the inferential force present in the logical relationship between the topic and the case at hand. Hence Aristotle’s claim (164a10-11) that ‘it is not possible to deduce anything without a universal’.

(4) Accustom yourself to turn one single argument into several, but conceal this as darkly as possible, and keep as far away as you can from anything closely connected with the topic under discussion; statements of the most general content are most suitable for this end (163b34-164a2).

(5) Be careful when it comes to universalizing arguments. Make records of arguments in a universal form, even though the discussion

<sup>156</sup> Smith (1997), 152-64.

has been concerned with a particular case; this will enable you to divide a single argument into many. But for yourself, refrain as much as you can from explicitly bringing your arguments on to the universal level. You should also examine your arguments and see if they are proceeding on the basis of general application; for all particular arguments are also argued universally, and the proof concerning what is universal is implied in any particular proof, because it is impossible to reason at all without using at least one universal premiss (164a3-11; cf. *APr.* I 24).

(6) Display your training in inductive reasoning against a young man, in deductive (τῶν συλλογιστικῶν) against an expert. Secure your premisses from those skilled in deduction, and from experts in induction their parallel cases. To put the matter simply, it is the skilled propounder and objector who are true dialecticians. For to propound a thesis boils down to turning many things into one (for the end to which the argument is directed presents itself in universal subsumption),<sup>157</sup> whereas to frame objections is to split up one thing into many; for the objector either distinguishes or demolishes, partly conceding, partly rejecting the theses propounded (164a12-b7).<sup>158</sup>

(7) Do not argue with any casual person nor join issue with casual acquaintances (164b8-15).

(8) You ought to have ready-made arguments which will do for a very large number of occasions. These arguments are those which are universal, and those for which it is rather difficult to provide material from everyday experience (164b16-19).

### 5. 8 The *Sophistic Refutations*

In the *Sophistic Refutations* (*SE*), which may be considered a kind of appendix to the *Topics*,<sup>159</sup> Aristotle goes on to deal with sophistic reasoning. To be familiar with these arguments is indispensable for the dialectician in order that he may avoid them himself and not get entangled in the drudgeries of sophistic argument. A sophistic refutation is an argument that appears to be a refutation but really is a fallacious argument (164a20-21). Thus the treatise is, in fact, a study

<sup>157</sup> For example, if you intend to prove that pleasure in music is good you have to claim that *all* pleasure is good. See *APr.* I 24, 41b9-13.

<sup>158</sup> Similar recommendations to fool the adversary are found in *Rhet.* II 24.

<sup>159</sup> See *Int.* 11, 20b26.

of fallacies in general, classified under various headings. They divide into two main classes, viz. fallacies that depend on the linguistic form of the arguments and those that do not. After two introductory chapters the first main part (chs. 3-15) discusses the different fallacies, while the second (chs. 16-33) deals with their solutions. An epilogue (ch. 34) finishes this work and the tracts on logic as a whole.

### 5. 81 *Introductory remarks (SE, chs. 1-2)*

After a remark about the occurrence of glamour and embellishment in any domain of life Aristotle points out that in disputations, too, reasoning and refutation are sometimes real, and sometimes not, but merely appear to be real owing to men's inexperience (164a23-b27).<sup>160</sup>

First reasoning and refutation are defined. Reasoning (συλλογισμός) is based on certain statements being posited in such a way as to necessarily cause the assertion of something different from what has been stated, on the mere ground that these were stated. Refutation (ἔλεγχος), on the other hand, is reasoning which involves the contradiction of the conclusion drawn.

Naming and modes of designation play an important part in reasoning and refutation. It is impossible to argue by introducing the things themselves (αὐτὰ τὰ πράγματα) that are under discussion and so we use their names (τοῖς ὀνόμασιν) as symbols to represent them (ἀντὶ τῶν πραγμάτων).<sup>161</sup> Therefore we assume that what happens in the case of names, happens with the things as well. This is compared to our attitude in counting: people who calculate start from a similar supposition with regard to their counters. They too take the counters to be representative of what happens in reality. However, as far as naming is concerned, there is a telling difference between what is representative and what is represented. The number of names is finite, and the same holds for phrases (λόγοι), but things are infinite in number. And so the same phrase and the same name must necessarily signify more than one thing. Thus those who are not familiar with the force of names, easily fall victim to false reasoning, both

<sup>160</sup> In ch. 16, 175a12-16, Aristotle says that when we are up against contentious disputants, we must try to dispell the appearances of their success.

<sup>161</sup> Cf. my section 2.23. What is claimed here about the representativity of linguistic expressions is said of mental tools in the famous adage at *An.* III 8, 431b29-432a1: "The stone does not exist in the soul, but only the form of the stone".



when they are arguing themselves and when they are listening to others (165a6-17). Given the fact, then, that sophistical reasoning exists, Aristotle proposes to deal with it (165a32-37).

In the second chapter the four kinds of argument used in disputations are enumerated. Didactic (διδασκαλικοί) arguments are those which reason from the starting-points appropriate to each branch of learning, and not from the opinions of the respondent; for the learner should take things on trust (πιστεύειν). Dialectical (διαλεκτικοί) arguments are those which reason from premisses generally accepted, to the contradictory of the thesis initially propounded. Examination-arguments (πειραστικοί) are those which reason from premisses accepted by the respondent and necessarily known to one who claims to have knowledge of the subject involved.<sup>162</sup> Contentious arguments are those which reason or seem to reason to a conclusion from premisses that seem to be generally accepted but are not so (165a38-b8).

The various objectives which those who compete and contend in argument have in mind are refutation, fallacy, paradox, solecism (i.e. to force the answerer, as a result of his argument, to speak ungrammatically), and to reduce the adversary to a state of babbling (i.e. making him say the same thing over and over again); or, if all these things do not happen in reality, the opponent should at any rate cause the answerer to appear to commit some fallacy (ch. 3, 165b12-22).

The second aim of the sophist, viz. to show that the respondent is stating a fallacy and to lead the argument to a paradox, is treated by Aristotle in chapter 12 (172b19-173a30), which also includes a complete battery of tricks, whereas chapter 13 and 14 are about babbling (173a31-b16) and solecism (173b17-174a12), respectively.

The chapter on babbling tells us how to bring the disputant to a state of babbling, i.e. to make him say the same thing over and over again. Arguments of this kind are said to occur in a twofold way. First this happens when we deal with relational terms in cases in which not only the genera of the things spoken of are relational but these things themselves are so designated as well, such that the thing in question may be rendered in relation to its very self, calling e.g. 'appetite' 'appetite for something', or 'double', 'double of half'. This being so, the opponent may induce you to call a thing 'the double-of-

<sup>162</sup> Cf. *Met.* Γ 2, 1004b25-26: "Dialectic is merely critical, where philosophy claims to *know*". Peirastics is a branch of dialectic (*SE* 8, 169b25).

half of half' or even 'the double-of-half-of-half of half', and so on and so forth. Secondly it happens when non-relational things are discussed which are signified by a term containing an attributive notion evocative of the substrate underlying the attribute. Along these lines the opponent may confront you with the argument: 'If what is snubness is concavity of the nose, there is talk of something like "a snub nose is a concave-nose nose"'.

In this context of competitive arguments, in which victory is the main objective, we need not to be surprised that Aristotle does not recall his earlier more discriminating treatment of such cases presented in the *Topics*. In *Top.* VI 3, 140b31-141a14 he explained in a quite subtle manner that when the respondents conceding 'Man is two-footed' is forced by the opponens to concede 'A terrestrial two-footed animal is a biped', it is wrong to accuse the man of babbling. Instead it is the attacker who in doing so confuses appellation with sentence predication.<sup>163</sup>

### 5. 82 *The fallacies depending on linguistic features*

There are two modes of refutations; one group has to do with the language used (παρὰ τὴν λέξιν); the other is unconnected with language (ἔξω τῆς λέξεως). There are six in the first group: equivocation, amphiboly, combination, division, accent, and form of expression. They are not defined, but clarified by examples following an operational description.

(1) EQUIVOCATION. E.g. 'the sick man' may stand for 'the man who is now sick' and 'the man who was formerly sick' (4, 165b30-166a6; 166a14-21).

(2) AMPHIBOLY or *double entendre* of a composite expression. A well-known instance of such a double-edged saying is 'To wish me the enemy to capture' (4, 166a6-21).

In fallacies depending on equivocation and amphiboly the deception arises from someone's inability to distinguish the various meanings of that which is said in different ways (τὸ πολλαχῶς λεγόμενον), the most difficult among which are 'unity', 'being', and 'sameness', Aristotle adds (7, 169a22-25).

(3) COMBINATION or taking certain words syntactically together (παρὰ τὴν σύνθεσιν). E.g. 'A man can walk when sitting' (4, 166a23-32).

<sup>163</sup> For the important difference between these two see my section 2.41.

(4) DIVISION or taking certain words syntactically apart (παρὰ τὴν διαίρεσιν). E.g. '5 is 2 and 3' (4, 166a33-38).

In fallacies depending on combination and division the deception is due to the supposition that it makes no difference whether the phrase (λόγος) is taken together (συντιθέμενον) or disjoined (διαιρούμενον), as is indeed the case with most phrases (7, 169a25-27).

(5) ACCENT or varying a word's accentuation or aspiration. E.g. taking ὄρος ('mountain', 'hill' for ὀρός ('whey') or ὄρος ('boundary', 'landmark'), or taking οὐ ('not') for οὗ ('whose' or 'from whom'); 4, 166b1-9; cf. 20, 177b3-4.

In fallacies which depend on accentuation the deception is likewise due to the assumption that differences of accentuation do not matter; in most cases, indeed, it makes no difference for the meaning of a word whether it is pronounced with a lower or a higher pitch (7, 169a27-29).

(6) FORM OF EXPRESSION or FIGURA DICTIONIS occurs when what is different is expressed in the same form (4, 166b10-19). E.g. when a categorial mistake is made, such as expressing qualitative being by quantitative being, or active by passive, or having a state by activity, and so on according to the distinctions made previously (in *Top.* I, 9).

In this kind of fallacy the deception is due to similarity of language. It is indeed not easy to determine in what cases a different manner of expression leads to calling up things otherwise, and in what cases this does not happen.<sup>164</sup> By this remark Aristotle has the different ways of categorizing things in mind, the distinction of which is vital to uncovering the truth ("You could almost say that (σχεδόν) he who is able to do this comes near to seeing what is true"). Then Aristotle continues:

SE 7, 169a33-36: Above all one is seduced<sup>165</sup> into giving one's assent to the fallacy because we customarily take (ὑπολαμβάνομεν)<sup>166</sup> everything assigned to something (πάν τὸ κατηγορούμενόν τινος) as a *this*,

<sup>164</sup> The Greek has (169a31): "in what modalities things are called up as being in the same way, and in what modalities as being in a different way".

<sup>165</sup> Following the ingenious emendation (ἐπισπᾶται) of the different MSS readings (ἐπίσταται, ἐπίστανται, ἐπιστήσεται) proposed by Edward Poste (in his translation, 116), who aptly refers to Plato, *Sophist* 236D6: "[...] or has the current of the language, accustomed as you are to it, carried you along (συνεπεσπᾶσσο) to give your assent so readily?".

<sup>166</sup> This verb is often used in the sense of 'to assume without good reason'; Liddell & Scott s.v. Note also the use of the present tense.

and, hearing the expression, we understand<sup>167</sup> it as one single thing. For it is to the one and subsistent thing (τῷ γὰρ ἐνὶ καὶ τῇ οὐσίᾳ) that this-ness and being are deemed to belong in the fullest sense.<sup>168</sup>

Next follow some interesting notes on the at times rather ambiguous function of language with regard to both dispute and private thought. This type of fallacy, it is said (169a36-b2), has everything to do with language. Firstly, because the deception caused by this fallacy occurs more commonly when we are inquiring together with others than by ourselves: for an inquiry with someone else is carried on by means of speech whereas in our own minds it is carried on quite as much through the thing itself (δι' αὐτοῦ τοῦ πράγματος). But, secondly, in solitary inquiry too, a man is liable to be deceived when he bases his inquiry upon speech. And, thirdly, the deception arises out of the likeness, between different things, that is, and this likeness arises from language.

### 5. 83 *The fallacies unconnected with language*

Of fallacies unconnected with language there are seven kinds: those depending on a coincidental mode of being, those depending on the absolute or qualified use of an expression, those depending on ignorance of the nature of refutation, those depending on the consequent, those depending on begging the question, those mistaking a non-cause for a cause, and, finally, the fallacy of making several questions into one (166b21-27). Their occurrences are described.

(7) ACCIDENT. Fallacies called SECUNDUM ACCIDENS (παρὰ τὸ συμβεβηκός) occur when an attribute is claimed to fall in a like manner to the substrate and its accident (5, 166b28-36). E.g. in 'If Coriscus is different from "man" he is different from himself'; in fact, there is in this case a confusion between formal and material (or extensional) difference.

Properly speaking, this fallacy does not concern incidental properties being wrongly assigned to something, but rather the logico-semantic incorrectness of assigning them in a certain context, irrespective of the thing's really possessing or lacking them. As a matter of fact, this fallacy may even bear on the incorrect assignment of non-

<sup>167</sup> Notice the allusion to my insufficient awareness of hearing well-known expressions conveyed by the verb ὑπακούειν, lit. 'to hear what is omitted, or not explicitly expressed'.

<sup>168</sup> It is worthwhile to notice that the notions 'this-ness' and 'one-ness' are loosely associated, and thus match the pair ὄν and οὐσία.

incidental properties, in cases, that is, in which the property under examination, though essential in itself, is nevertheless coincidental to a thing's special mode of being by which it is actually brought up for discussion. For instance, if a triangle is brought up as 'a certain mathematical figure', its essential property of having the inner angles equal to two right angles (or 'being 2R') is coincidental to its being a figure.<sup>169</sup>

In fallacies of this kind, Aristotle comments (169b3-6), the deception is due to an inability to distinguish between what is the same and what is different, the one and the many, and the inability to discern to what<sup>170</sup> kind of designations <alone> all the same things belong as to the substrate. To understand these lines, it should be recalled that Aristotle said earlier (166b28-32) that the fallacy of 'Accident' occurs when it is (erroneously) claimed that some attribute likewise falls to a thing and to any of its coincidental modes of being; erroneously indeed, since, though it is one and the same thing which many modes of being fall to, it does not necessarily follow that all these modes likewise fall to any of the modes assigned as well as to the substrate of which they are said.<sup>171</sup>

(8) SECUNDUM QUID AND SIMPLICITER. These fallacies occur when the absolute and qualified uses of expression are confounded (5, 166b37-167a20). E.g. the expressions 'not to be something' and 'not to be'.

(9) IGNORATIO ELENCHI (5, 167a21-35). These fallacies arise by putting reasoning ('proof') and refuting on a par, as a result of omitting one or more elements of the definition of refutation. It runs (167a23-27): "A refutation is the contradiction of one and the same attribute — the latter not being taken as a name but qua objective content ( $\pi\rho\acute{\alpha}\gamma\mu\alpha$ ),<sup>172</sup> nor taken in its synonymous forms, but as this very name — accomplished from the propositions granted, with necessary inference — the initial point at issue not being included — in the same respect, relation, manner, and time <in which it was asserted>". So "the definition of 'reasoning' ('proof') also applies to 'refutation', except that 'of the contradiction' is appended; for refutation is a proof of the contradictory".<sup>173</sup>

<sup>169</sup> SE 6, 168a40-b4; APo. I 5, 74a25-32.

<sup>170</sup> Reading τὸ ποῖοις instead of the MSS reading τοῖς ποῖοις at 169b4-5.

<sup>171</sup> At SE 8, 170a4, this fallacy is briefly characterized as substituting what is coincidental for what is essential.

<sup>172</sup> SE 8, 170a5-6.

<sup>173</sup> SE 6, 168a35-37.

All thirteen fallacies can be represented as forms of the single fallacy, *ignoratio elenchi*, as each of them are in a way a violation of the definition of refutation.<sup>174</sup> The reduction of ‘Accident’ to ‘*Ignoratio elenchi*’ shows a remarkable parallel with the *καθ’ ὅλου* exposition found in *APo.* I, chs. 4-5. Once proof (*συλλογισμός*) has been defined, Aristotle says, it can easily be proved that the cases of the fallacy of ‘Accident’ are cases of *ignoratio elenchi*. For the same definition ought to hold of refutation too, except that a mention of ‘the contradictory’ is here added; for a refutation (*ἔλεγχος*) is a proof of the contradictory. If, therefore, any proof for the presence of a coincidental mode of being is missing no refutation takes place. An example is presented:

*SE* 6, 168a38-40: For supposing, when *those* are the case, *this* must be the case, and that the latter one is white, then there is not on account of the reasoning any necessity for its being white.

Aristotle’s example may be implemented as follows. Take for *τούτων* (‘these <two>’) ‘being an animal’ and ‘being capable of neighing’ (‘hinnibile’), and for *τόδε* (‘a third’) ‘being a horse’.<sup>175</sup> The reasoning will run as follows: If, when there is an entity which is both an animal and a being capable of neighing, it must necessarily be a horse, and this horse, in fact, is white, then nothing will necessitate us to think that it is white just on account of the implication “‘animal’ *plus* ‘hinnibile’, hence, by necessity, ‘horse’”. Its factually being white has nothing to do with the necessary relationship between its being an animal *plus* hinnibile and its being a horse, or to put it otherwise, its coincidental mode of being white is beyond the range of the force of the implication.<sup>176</sup> The continuation of this passage presents another example, which may remind us of the one given in *APo.* (I 5, 74a25-32):

*Ibid.*, 168a40-b4: And again, given that the triangle has its angles equal to two right angles, and that it happens to be a figure, a first or elementary entity, it is not because it is a figure or a first or elementary entity that it is that [viz. something having its angles etc.];

<sup>174</sup> *SE* 6, 168a17-169a21.

<sup>175</sup> The translators all erroneously take *τούτων* and *τόδε* to stand for different substances, A, B, and C, instead of taking them as three modes of being of one single substrate, just as the next illustration is about different modes of being belonging to one single mathematical figure.

<sup>176</sup> Likewise, though a stone’s being a body and having a coloured surface are necessarily linked up with its being a stone and are also mutually connected, its having a white surface is one of its coincidental modes of being.

for the proof is concerned with it, not qua figure or qua elementary entity, but qua triangle.

Remarkably enough, it is along these fallacious lines that laymen try to refute specialists and experts;<sup>177</sup> for they use reasoning based on 'Accident', and the experts, being incapable of making distinctions, either give in when questioned or think that they have done so when they have not (168b6-10).<sup>178</sup>

On the other hand, fallacies depending upon the making of several questions into one are due to yet another failure regarding the definition of 'refutation', viz. our incompetence to differentiate or correctly determine its definiens. For since a refutation is a contradiction (being an affirmative statement *plus* a negative one about one and the same thing),<sup>179</sup> it has to be a statement (πρότασις). Now, the latter is defined as a single assignment to a single substrate (ἐν καθ' ἐνός).<sup>180</sup> Aristotle explains (169a7-18) that the same definiens applies to 'one single thing' and 'the thing' without qualification (ἀπλῶς τοῦ πράγματος), as e.g. the definiens of 'man' and 'one single man' is the same. Applying this to the definition of refutation, you will observe that this fallacy too depends on ignorance of the nature of refutation.

In his further comments (169b9-12) on this kind of fallacy, Aristotle points out that as far as<sup>181</sup> the distinction between a qualified and an absolute statement is concerned, the deception is due to the smallness of the point of difference involved; for we regard the limitation to a particular case or respect or manner or time as having no effect upon the meaning of the expression, and so concede the statement universally.

(10) PETITIO PRINCIPII or begging the question consists in assuming the initial point to be proved.<sup>182</sup> This fallacy, too, is said (169b12-17) to depend on our ignoring a small but significant difference of expression: for when people assume the initial point at issue, the deception is due to ignoring such a difference. As a matter of fact, this applies to the items (12) and (13) as well, since, from the afore-said cause, in all such cases we fail to accurately carry out the definiens of 'statement' and 'reasoning'.

<sup>177</sup> Cf. *SE* 11, 172a30-36.

<sup>178</sup> Cf. *SE* 8, 169b20-29.

<sup>179</sup> *Int.* 6, 17a33-37.

<sup>180</sup> *Int.* 11, 20b22-30, where an explicit reference to our passage is found.

<sup>181</sup> Taking the καὶ at 169b10 as indicating an explicative restriction ('namely').

<sup>182</sup> *SE.* 5, 167a36-39; cf. *APr.* II 16, 64b28-65a37 and *Top.* VIII 13, 162b31-163a13.

(11) CONSEQUENT. The fallacies called SECUNDUM CONSEQUENS (παρὰ τὸ ἐπόμενον) arise because people think that the inference is reciprocal or bilateral. For given that if [*x*] is, then of necessity [*y*] is, men also fancy that if [*y*] is, then of necessity [*x*] is. Such fallacious reasoning, which are often connected with sense-perception, frequently occurs in rhetorical arguments; for when people wish to prove that a man is an adulterer, they seize upon the consequence of that character, namely that the man dresses himself elaborately or is seen wandering abroad at night. But these things do not prove anything.

These fallacies are said (169b6-9) to resemble those of 'Secundum accidens', because 'Consequens' is a branch of 'Accident';<sup>183</sup> in many cases, indeed, Aristotle says, appearances bring it to our mind—and one is inclined to believe it—that if this particular mode of being<sup>184</sup> (τόδε) is inseparable from that other (ἀπὸ τοῦδε), the latter must be inseparable from the former as well.

(12) NON-CAUSA UT CAUSA (5, 167b21-36). This fallacy occurs when that which is not a cause is inserted in the argument, suggesting that the refutation rests precisely upon the inserted element. It is frequently found in attempted proofs *ad impossibile*. Such arguments are not absolutely inconclusive, but only with reference to the point at issue. The questioners themselves are often equally unaware of such a falsely imputed cause. In fact, this unawareness merely bears on a small point of difference, which is none the less influential (169b12-17).

(13) SECUNDUM PLURES INTERROGATIONES (5, 167b38-168a16). This fallacy occurs when it goes unnoticed that one answer is given to a twofold (or threefold etc.) question, as if there were only one question. Like the previous kind of fallacy, this one is due to ignoring a small but effective point of difference (169b12-17). It is said to offend against the requirement that there should be a genuine statement or problem sentence.<sup>185</sup>

<sup>183</sup> Cf. SE 8, 170a4-5.

<sup>184</sup> Once again the translators all erroneously take τόδε used twice to refer to two different things, instead of two different modes of being falling to one and the same thing.

<sup>185</sup> SE6, 169a6-18; 8, 170a3.



5. 84 *Various notes on the nature of refutation and its different types*

In his subsequent comments in chapters 8 and 9 on the nature of sophistical refutation, Aristotle points out that by sophistical refutation and reasoning not only the seeming but unreal reasoning and refutations are meant, but also those which, though real, only seem to be appropriate to the subject-matter in question (πράγμα), without it in fact being so. These are such that they fail to do the job of really refuting a thesis and exposing the disputant's ignorance of the issue at hand, which is the function of the art used for testing theses (πειραστική). This art is a branch of dialectic, but it may prove a false conclusion owing to the ignorance of the answerer. Sophistical refutations, on the other hand, even if they reason to the contradiction of the man's view, do not make clear if he is ignorant; for sophists try to ensnare the experts as well with this kind of argument (169b18-29).

An apparent refutation is based on the same elements as the genuine one; that is to say, that if any one of these elements is lacking, there would only be an apparent refutation. An instance of this is the one that aims to show that what is concluded does not follow from the argument — in fact, the 'reductio ad impossibile' is of this sort. In still other cases, the conclusion follows only verbally (ἐπὶ τοῦ λόγου) and not on the level of the thing under discussion (μὴ ἐπὶ τοῦ πράγματος);<sup>186</sup> and there are also cases where, instead of universally applying and in the same respect, manner, and time, the contradiction is somehow restricted, as well as cases in which there is a begging of the question. Always the same deceitful causes are at work (170a1-11).

Sophistical refutation is not refutation without qualification, but is related to some person, and so likewise is sophistical reasoning. For it is the answerer's using, or admitting of, equivocal terms, or ambiguous phrases (and so on for the other logical offences), which is required for there to be a refutation (170a12-19).

In general an expert in refutation has to be familiar with everything that is: for some refutations will depend on the starting-points of geometry and the theses following from them, others on those of medicine, and so on for the other disciplines. Of course, we need not be familiar with the commonplaces underlying all kinds of refutation,

<sup>186</sup> Notice the opposition explicitly made here between 'word-concept' and 'thing'; cf. the third semantic Main Rule (RIR; section 1.71), and my sections on πράγμα (2.22-2.24).

but only those which concern dialectic: for these are common to every art and faculty, and, accordingly, it is the dialectician's job to examine the refutations based on the starting-points which do not belong to any specific domain, but are common to all.<sup>187</sup> What any refutation is about is proving the contradiction of a given thesis, no matter what discipline it belongs to: for a refutation is just the proof of the contradictory of any thesis whatsoever (ch. 9, 170a20-b11).

5. 85 *No genuine distinction between expressions and things expressed*

Chapter 10 opens (170b12-40) with a momentous observation on the intentional use of language.<sup>188</sup> Some people erroneously oppose arguments aiming at the verbal expression (πρὸς<sup>189</sup> τοῦνομα) to those directed to its thought (διάνοια) or content. Such a distinction is absurd. For what is failure to direct your argument to the thought except what happens whenever a man, in using the expression, thinks that it is not used in his question in the same sense in which the person questioned made his concession? And this is precisely what to direct the argument to the mere expression, too, would boil down to. On the other hand, addressing the thought happens whenever a man applies the expression in the sense the respondents had in mind when he made his concession (170b10-19). Thus, Aristotle intends to say, to aim at the expression and to address the thought are entirely in line.<sup>190</sup>

If now, Aristotle continues (170b19-25), in dealing with an expression having more than one meaning (e.g. 'one' or 'being'), anyone, both the opponens and the respondens, were to think that the expression had only one, and, accordingly, both were to base their question and answer, respectively, on this one meaning, will, then, the argument be directed to the expression, rather than to what the person questioned had in mind? Aristotle seems to suppose that to put the question this way comes down to answering it in the negative.

The subsequent lines (170b25-35), I take it, open with a rephrasing of the previous question in order to give some support to the adherents<sup>191</sup> of the aforesaid absurd theory. Supposing, then, at least

<sup>187</sup> Cf. SE11, 172a11-13.

<sup>188</sup> Third semantic rule, RIR; my section 1.71.

<sup>189</sup> There is no reason for taking the proposition in its adversative sense, to stand for 'against'.

<sup>190</sup> Cf. SE14, 174a8-9: "For 'man' and 'white' are both names and things as well".

<sup>191</sup> They are referred to at 170b33 (οἱ δὲ φασί).

(εἰ δέ γέ τις)<sup>192</sup> — <you may object> — one does think that the expression has several meanings, then obviously the argument fails to address the content intended by the other. This suggestion is rejected by Aristotle on three grounds,<sup>193</sup> all showing that their 'either-or' position is untenable. First (πρῶτον), it is possible for any such argument that bears more than one meaning (owing, that is, to their containing ambiguous expressions) to be directed equally to the expression and the thought; second (εἶτα), this is possible for any argument whatsoever, since the circumstance of being directed to the thought depends not on the phrasing, but on the fact that the respondent has a certain attitude of mind towards the points he has conceded;<sup>194</sup> third (εἶτα), it is possible for all arguments to be directed to the expression. — This implies a problem for the adherents to the 'either-or' thesis; for in this doctrine (ἐνταῦθα), 'to be directed to the expression' means 'not to be directed to the thought'. Now if all are not directed to either the expression or the thought, there will be a third class of arguments not directed to either; but they declare that the classification is exhaustive, meaning that all the arguments are directed *either* to the expression *or* to the thought, period.

Yet surely (ἀλλὰ μὲν),<sup>195</sup> reasonings depending on the verbal expression form merely a branch of those dependent on a multiplicity of meanings; for it is absurd to say, as they have done, that 'dependent on the expression' (τὸ παρὰ τοῦνομα) covers all the arguments depending on language (τοῦς παρὰ τὴν λέξιν). The truth is that there are some false arguments which do not depend on a certain attitude of mind on the part of the answerer towards them but are due to the fact that the argument itself involves the kind of question that bears more than one meaning (170b35-40).

<sup>192</sup> After conjunctions the particle γέ tends to emphasize the modification (Liddell & Scott s.v. I, 3); thus it singles out the stronger case here.

<sup>193</sup> This rejection is not made explicit in the Greek text. As often, the subsequent conjunction γάρ is used in an elliptical context: that of which γάρ gives the explanation is omitted, and must be supplied (Liddell & Scott, s.v. I 3). It should be noticed that other translators (Pickard-Cambridge, Tricot), who give a different interpretation of the passage, also take γάρ to be used elliptically. A similar use is found some lines further on (at 170b31).

<sup>194</sup> From the twelfth century onwards, the problem of whether expressions are by themselves equivocal was eagerly discussed, e.g. in the influential *Ars Meliduna*; De Rijk (1967), II I, 297f.

<sup>195</sup> This conjunction often alleges something not liable to be disputed; Liddell & Scott, s.v. μὲν II, 3.

After a short digression on refutation and proof (171a1-11), the previous argument is resumed and given (171a12-27) some more corroboration by showing that (a) arguments directed to the thought always bear on the expression as well, and (b) some arguments indeed are directed to the expression, but not all of these are even apparent refutations, still less genuine refutations: for there are also apparent refutations which are not connected with language at all, such as, among others, those connected with 'Accident'.

The remainder of chapter 10 (171a28-b2) and all of the next one (171b3-172b4) are about the differences between the diverse sorts of refutation, corresponding to the sorts of arguments, viz. didactic vs. dialectical, peirastic vs. dialectical, contentious vs. dialectical, contentious vs. sophistical.

#### 5. 86 *How to ask questions effectively*

Since to ask questions is a substantial part of dialectic,<sup>196</sup> an entire chapter is devoted (15, 174a17-b40) to the most profitable ways of asking questions. For the most part the devices recommended betray a high grade of trickery. The opponent should try to increase his chances of refuting the respondent by producing length; for it is difficult to keep track of many things at the same time. In a word, all the resources for concealing your proper intentions as an opponent mentioned before (*Topics* VIII, ch. 1) are in order; "for concealment is for the purpose of escaping detection, and escape from detection is for the purpose of deception" (174a26-29). Other devices are: interrogation by means of negative questions, or by assuming that you already have the respondent's universal admission. Or seek discrepancies between his theses and the views held by people whom he admits to say and do aright. One should not ask the conclusion in view in the form of a statement — some devices should not even be put in the form of a question at all — but rather treat the conclusion as already conceded.

#### 5. 9 *On the respondent's job. How to rebut fallacious attacks*

The second main part of the work (chs. 16-33) is about how the answerer should develop rebuttals to the fallacious attacks upon his

<sup>196</sup> *SE* 10, 171a38-b2; 11, 172a17-18; *Top.* VIII 2, 158a15-21; VIII, 4; *Int.* 11, 20b22-30.

initial thesis. First some remarks are made about how, generally speaking, rebuttals should be framed, and for what purposes they are useful (chs. 16-18); then the refutations that specifically apply to the diverse fallacies are treated (chs. 19-32), followed by some general notes on piecemeal difficulties concerning the detection of fallacies, and on how to deal with shrewd or stupid arguments (ch. 33).

#### 5. 91 *Some general remarks on how to react to fallacious attacks*

For philosophy the study of refutations has a twofold use. The first is that it directs our attention to language, and puts us in a better position to discern when linguistic differences and varieties are meaningful *in re*, and when they are not; the second is its use for reasoning in one's own mind (175a5-12).

The author appends (175a12-16) as a third motive that it may contribute to one's reputation, by giving us credit for having received a universal training, and having a broad experience. As to the latter, to be well-experienced in matters of refuting fallacies is indispensable for promptly encountering your opponent's attacks. As in other areas, a lesser or greater degree of speed is a question of training (175a17-30).

At times, we ought deliberately to prefer arguing plausibly to arguing from truth: for, generally speaking, when we are up against contentious disputants, we must deal with them by dispelling the appearances of their success. The only reason we should make serious distinctions is to prevent the conclusion from looking like a genuine refutation. When opponents have put their questions improperly (which they are likely to do in matters of ambiguity), the respondent cannot confine himself to answering simply 'Yes' or 'No', but is obliged to add something in his answer to correct the unfairness of the opponent's *modus operandi* (ch. 17, 175a31-b14).

If anyone is going to assume that an argument turning upon ambiguity may pass for a real refutation, it will, in a sense, be impossible for the respondent to escape being refuted. For in the case of objects being in our range of vision,<sup>197</sup> he has no choice but to deny the designation (ὄνομα)<sup>198</sup> one has previously assigned to something, and

<sup>197</sup> I take ὁρατός here to equal Latin 'in conspectu', not just 'visible', as it is commonly taken to mean.

<sup>198</sup> As often, the word ὄνομα is used here, I take it, loosely as a *nomen commune* to indicate indiscriminately any appellation, whether substantive or attributive.

to assign the one he has denied. The remedy suggested by some people is of no use. E.g. given the choice, on account of a person presently in view, between saying either ‘Coriscus is educated’ or ‘Coriscus is uneducated’, they (propose to) answer not ‘Coriscus is educated and uneducated’, but ‘*This* Coriscus is educated and *this* Coriscus is uneducated’. This is without avail indeed, for the same dictum is in order in ‘Coriscus<sup>199</sup> is educated’ (or ‘uneducated’) as in ‘*This* Coriscus is educated’ (or ‘uneducated’); and it is this very dictum which (ὅπερ) the man is affirming and denying<sup>200</sup> at the same time (175b15-23).

“But perhaps these two dictums do not mean the same — you might object, to give some support to the aforesaid theorists — for the designation used there is also different (viz. ‘educated’ and ‘uneducated’, which make the ‘Coriscus’ different, too); therefore there is still *some* difference<sup>201</sup>“. Aristotle is not very impressed with this counter-argument and replies: “But if the man is going to use in one case the simple appellation ‘Coriscus’, while in the other he is to add ‘a certain’ or ‘this here’, this is unjustifiable; for one may just as well do it the other way round, which would imply one’s assigning them (in fact, *him*, that is to say) two contradictory attributes, for to whichever one adds it, it makes no difference” (175b23-27).

Be that as it may (οὐ μὲν ἄλλ’), Aristotle continues (175b28-38), the answerer’s only resource in such circumstances is to make use of his right to make distinctions, since this right is granted in disputations. Therefore it is quite clear that to concede the question without drawing any distinction is simply a mistake. It frequently happens, however, that people hesitate to draw distinctions, for fear of seeming to be perversely obstructive. But we must not hesitate to use the right of drawing distinctions.<sup>202</sup>

<sup>199</sup> From Aristotle’s words at 175b24-27 it is clear that Waitz’s supplying τοῦτον at b21 is erroneously followed by the editors.

<sup>200</sup> When we retain the singular verbs found in the majority of our MSS, we have to take Aristotle to refer to the man who is following the device of the aforesaid theorists. On the other hand, reading at 175b23 (with Boethius’s exemplar) the plural φασι τε καὶ ἀπόφασιν, this line refers to the aforesaid theorists themselves. The Parisinus 1843 and the Basiliensis 54 read two future infinitives.

<sup>201</sup> Sticking to the MSS reading and rejecting Poste’s changing the indefinite τι into the interrogative τί. As for its position, the indefinite pronoun may stand as the second word; see Liddell & Scott s.v. A III, 2.

<sup>202</sup> In the Late Middle Ages disputations were interspersed with ‘Distinguo!’s and ‘Contradistinguo!’s on both sides. This practice was defended by referring to Aristotle’s admonition.

In the subsequent lines the problem mentioned above arising from fallacious arguments depending on equivocation and ambiguity is associated with the fallacy of asking more than one question (175b39-176a18).

As for producing rebuttals, of these, too, you must sometimes prefer the apparent one to the true one, just as in the case of refutations dealt with before. In the case of statements which are probable, you should answer with a simple 'Granted!'; for then there is the least likelihood of being refuted on an accessory point. Other instructions are presented, bearing on 'paradox', and 'begging the question'. If none of the above resources are available, you must resort to the plea that the conclusion has not been properly set forth (176a19-37).

In the remainder of the chapter some more admonitions are given. In the case of appellations used in their proper sense (*ἐν τοῖς κυρίως λεγομένοις ὀνόμασιν*), one must answer either simply by 'Yes' or 'No', or by making a distinction. To draw distinctions is salient, since it is the tacit understandings implied in our statements that make us vulnerable to refutation (176a38-b7). Whenever of two statements the truth of one entails the truth of the other of necessity, but not the other way round, you should, when asked which is true, concede the smaller one (the non-implicative one, that is), so that the opponens has to assert an extra proof: for the greater the number of premisses, the more difficult it will be for him to arrive at a conclusion. Further, in cases of opinions not generally accepted (e.g. 'the soul of animals is immortal'), take advantage of the opposite opinions, whenever you feel you should contradict a former thesis; in such cases you do not have to worry about simply being told 'You are wrong', nor is there any risk of being regarded as playing the sophist. Finally, whenever you foresee any question, be the first to make your preliminary demurs: for by doing so you can best disconcert the opponent (176b8-28).

In chapter 18 Aristotle goes on to speak about the nature of the genuine rebuttal. This comprises two things: rebutting correctly framed arguments by overthrowing them, and unmasking apparent reasoning by making distinctions. So those who wish to rebut an argument should observe, firstly, whether it is correctly framed, and, next, look and see whether the conclusion is true or false, and treat it accordingly (176b29-177a8).

5.92 *The special rebuttals to the fallacies depending on language*

Of the refutations that hinge upon equivocation and amphiboly some involve a question bearing more than one sense, while others betray this feature in their conclusion. At the outset, one must answer to an equivocal expression or a double-edged locution: ‘In one sense it is the case, in another it is not’. Generally speaking, even though your adversary is arguing straightforwardly, you must contend that his argument merely has bearing on the verbal expression (ὄνομα), not the state of affairs itself (πρᾶγμα), and so there is no refutation (ch. 19, 177a9-32).

In the cases of ‘Combination’ and ‘Division’ you ought to take what the opponent has stated in its contrary sense: change the divided sense into the combined sense, and the other way round (ch. 20, 177a33-b34). As to arguments playing on the wrong accentuation of words, you have to correct them; for the spoken word is not the same when pronounced with the acute as with the grave accent (ch. 21, 177b35-178a3).

Chapter 22 is about the far more interesting question of how to deal with the fallacies depending on figure of speech, and, in general, with similar expressions used for different things. Aristotle begins (178a4-8) his exposition by pointing out that the solution in these cases hinges on understanding how things are brought up according to various categorial modes of being. For the one man, say, when being questioned, has made a concession to the effect that some quidditative mode of being which is present, is not present;<sup>203</sup> while the other has pointed to some relational or quantitative mode of being as actually present — modes of being, however, which seem to be quidditative, because of the way in which they are expressed. Aristotle’s manner of expression is again tantalizingly elliptical, and what he means to say can only be clarified to some extent by the exemplification of the sort of arguments he has in mind.

The first example runs (178a9-11): ‘Is it possible to be doing and to have performed this act with reference to one and the same thing?’ — ‘No’. — ‘But it is surely possible to be seeing something and to have seen this same thing at the same time and under the same conditions?’. The answerer is in no position, it would seem, to escape the contradictory statements ‘It is possible’ and ‘It is not possible’. Some lines further, Aristotle goes on to explain (178a16-

<sup>203</sup> Reading μή ὑπάρχειν (ὑπάρχον).



24) that he none the less is not really refuted. For if someone, as is supposed in the previous example (ἐκεῖ), has conceded that it is impossible to be doing and to have done one and the same thing at the same time and then says that it is possible to see something and to have seen it, he is still not refuted, supposing that he states that seeing is not a form of doing but rather of undergoing. Such an additional point must be inserted, though he is supposed by the hearer to put expressions such as 'doing' ('making') and 'seeing' on a par in this respect, as is generally the case with things which are expressed in a like manner; for (whether or not maliciously) the hearer himself adds the missing link, because of the similar manner of expression.

Aristotle compares (178a24-28) this situation to what happens when equivocal expressions are used. In those cases, too, an additional question is required, to prevent the inexperienced disputant from thinking that his opponent has denied the state of affairs (πρᾶγμα) which he himself has asserted, and not, as he should have observed, merely the verbal expression (ῥοιμα), making use of its double sense.

To take another instance (178b11-12): 'What a man has, he has received', some people react straight away by overthrowing this thesis, saying that one can have what one has not received; for example, one can receive wine that is sound but have it in a sour condition if it has gone bad during transport.

Other arguments playing on the confusion between a thing's whatness and its being somehow affected are presented (178b24-179a11), some of which are of real importance from the logico-semantic point of view. 'If something is written down, did someone write it?'. — <Yes, of course>. — 'But it is written down that you are sitting; this is a false statement; but it was true at the time when it was written; therefore, what was written is at the same time false and true'. However, this is a fallacious argument, since for a statement or an opinion to be true or false concerns, not its this-ness, but merely a qualitative mode of being (οὐ τόδε ἀλλὰ τοιόνδε σημαίνει); 178b24-29.

The famous 'Third man' argument also belongs to this class of fallacious reasoning (178b36-39). It commits a similar muddling of this-ness and being such-and-such a thing.<sup>204</sup> It runs: 'There is a third man beside 'man' and the individual men'. But this is not so; for 'man' and indeed every generic name signifies not a *this*, but a such-

<sup>204</sup> *Cat* 5, 3b15-21, makes it clear that the universal (secondary ousia) is a ποιόν τι, rather than a *this*

and-such thing, or something quantitative or somehow relational or something like that.

Likewise (178b39-179a8) in the case of 'Coriscus' and 'Coriscus educated' there is the question whether they are the same thing or something different. For the former expression calls him up in his being a *this*, the latter in his qualitative being, so that it — i.e. this mode of qualitative being, inherent as it is in the substrate, Coriscus — cannot be isolated or extrapolated (ἐκτίθεσθαι)<sup>205</sup>; hence, it cannot be opposed to Coriscus as some different thing, either. As for the 'Third man' case, it is not the process of extrapolating (i.e. manhood from an individual man) that produces the 'Third man', but the admission that it should be precisely a *this* (ὅπερ τόδε τι); for what is precisely Callias (ὅπερ Καλλίας) and what is precisely man will not come down to being a *this*. Nor will it make any difference if one were to say that what is extrapolated is not precisely a *this* but precisely a such-and-such thing; for there will still be the 'one over many', such as 'man'.<sup>206</sup>

From all this the conclusion is drawn by Aristotle that you should never concede that what is assigned universally to all members of a class is a *this*, but say that it signifies either a being-such-and-such or a mode of relational or quantitative being, or something of that kind.

Aristotle has good reason to associate these figures of speech with ambiguity of language, since it is this ambiguity of synonymous and paronymous expressions which has been the core of the discrepancies in Greek metaphysical disputes from Parmenides onwards. We need not be surprised that in the survey (ch. 23, 179a19-26) of the rules for the refutation of fallacies depending on language, the figure of speech cases are recalled as cases of amphiboly.

### 5. 93 *The special rebuttals to the seven remaining fallacies*

Proceeding in chapter 24 to arguments depending on 'Accident', Aristotle states the rule that to all such fallacies one and the same rebuttal is applicable. To understand Aristotle's exposition of this general rule, we should be well aware of the way in which Aristotle uses the expression 'to call up something incidentally' (λέγειν κατὰ συμβεβηκός), and what, accordingly, something coincidental or a coincidental being (ὄν κατὰ συμβεβηκός) is. Whenever a term is

<sup>205</sup> For ecthesis see my *Index*.

<sup>206</sup> Cf. *Met.* M 3, 1078a17-21.

coincidentally assigned to something, it is to call up the subsistent thing under the aspect of one of its incidental modes of being — incidental, that is, to the mode of being which is, at the time, in the speaker's focus of interest. The problem, then, may be whether an attribute assigned to the thing's coincidental mode of being falls in the same (necessary) manner to the substrate in which it belongs to this coincidental mode of being itself. Now the fallacious arguer tacitly assumes or suggests that it does. Thus Aristotle begins by remarking that seeing that this is always the problem, you have to take exception to the case under examination:

SE 24, 179a27-31: Since it is indeterminate in what occasions an attribute should apply to the thing itself when it falls to the thing's coincidental mode of being, and sometimes it is generally held and agreed to apply, while at other occasions it is denied that it need belong, you must therefore, as soon as the conclusion has been drawn, say that in every case alike it does not necessarily belong.

To support your general verdict, you must have some instances at hand, e.g. 'Do you know the man who is approaching?'. Supposing I am speaking of Coriscus, 'to be approaching' is not the same thing as 'to be Coriscus'; so that, if I do know Coriscus but do not see that he is the man approaching I know and do not know one and the same man (179a32-b4). The error consists in transferring the property of being unknown, which falls to Coriscus in his capacity of approaching — to Coriscus as such.

The fallacies *secundum quid et simpliciter* require a different refutation. It consists in examining the conclusion in the light of its contradictory, to wit in looking and seeing if the thing in question can possibly have been *somehow* ('secundum quid') affected by the contradictory attribute. Anyhow, not in an unqualified sense, of course: for it is impossible for contrary and opposite dictums, and, consequently, their being asserted and denied at the same time, to apply in an unqualified sense to one and the same thing;<sup>207</sup> but when taken in a qualified sense this is quite possible (ch. 25, 180a23-31).

One of the famous fallacious arguments of the kind is: Is it possible for what is-not to be? — <No>. — But surely what is-not is something! Likewise: Even what is will <at a certain time> not be: for, then, it will not be among the things that are. Thus it will be true to say 'what is is not', ignoring the qualifications 'now' and 'later on'.

<sup>207</sup> For the law (principle) of non-contradiction (LNC) see my section 7.5 (Vol. II).

Likewise, Isn't it the case that 'to be something' and 'to be' simply are not the same thing — <Quite so>. — On the other hand, what is not, even if it is something, is not, in addition, 'being' without qualification (180a32-38).<sup>208</sup>

The fallacies depending on 'Ignoratio elenchi' should likewise be met by comparing the conclusion with its contradictory, and seeing if in the initial conclusion the diverse elements of the definients of 'refutation' are well observed (ch. 26). The different reactions available for exposing a begging of the question are briefly discussed in chapter 27.

The arguments depending on the 'Consequent' must be exposed in the course of the argument itself. The fallacious inferential sequence (ἀκολούθησις) is of a twofold type. Either it proceeds as though the universal follows from the particular, because it is indeed the case the other way round, or the erroneous process goes by opposites: 'if being *F* goes with being *G*, the former's opposite must go with the latter's'. However, the sequence, then, is the reverse (ch. 28, 181a22-30).

The refutation of the fallacies depending on something being superfluously added ('non-causa ut causa') should be examined by looking whether upon removing that addition the same conclusion will still follow (ch. 29). The fallacies depending on a multiplicity of questions should be met by disentangling the multiplicity (ch. 30).

#### 5. 94 *The rebuttals in connection with babbling and solecism*

The answer to arguments built on leading the disputant to babble ('nugation') boils down to strictly observing the difference between naming and sentence predication, particularly in cases where relational names and definientia have been added. It must be carefully observed that one has to avoid conceding the argument that the designations (κατηγορίας) used for things taken after their relational modes of being are significative by themselves (καθ' αὐτὰς τὰς κατηγορίας), when separated from their correlatives. For example, never concede that 'double', taken apart from its definitorial phrase 'double of a half' is significant by itself, just because it features in this phrase. It is true that, 'ten' features in the phrase 'ten minus one', and 'do' in 'not do', just as an affirmative expression features in any

<sup>208</sup> The 'argument about the thief' and its likes (180b17-39) are favourites of Peter Abelard's (1079-1142), who was not familiar with *SE*, for that matter.

negative one; but, none the less, if one were to assert 'this is not white' one is not asserting that it is white simply because 'being white' features in 'not being white'. Possibly, the bare word 'double' is not significative at all, any more than 'the' in 'the half' is; and even if it does have any signification it still does not have the same signification as in the combined expression. The same holds for such a relational term as 'knowledge': for when taken on its own it means 'knowledge of the thing known', but taking 'medical knowledge', it would be babbling to say that medical knowledge is 'knowledge of the thing known' (ch. 31, 181b25-35).

Turning to the well-known snub-nose example, Aristotle goes on to point out that in the case of definitorial designations aiming at the clarification of something's nature (τοῖς δι' ὧν δηλοῦται κατηγορουμένοις), you must (in your defence against an inconvenient conclusion) point to the serious case that a thing featuring in a definiens is not the same inside as outside it. For 'concave' has the same common meaning when used of a snub nose and of a bandy leg, but when it is combined once to 'nose', once to 'leg', nothing prevents it from differentiating its meaning; in the former case it signifies snub, in the latter bandy-shaped, and so it does not matter if you say 'snub nose' or 'concave nose'. Moreover, the expression must not be conceded in a straightforward assignment, resulting in taking the property for the substrate possessing it; for this would produce a falsehood. For snubness is not a concave nose but a particular thing, namely a condition, appertaining to a nose. Therefore there is no absurdity in supposing that a snub nose is one which possesses nasal concavity (181b35-182a6).

The refutations of fallacies built upon solecisms, which are discussed in chapter 32, for the most part hinge on grammatical corrections of the solecisms.

### 5.95 *On the evaluation of fallacious arguments*

Not all fallacies are equally difficult to unmask. First of all, the borderlines between the different types are shifting, so that the same argument may be held by some people to depend on the linguistic form, by others on 'Accident', and by still others on something else. But anyhow, the fallacies depending on equivocation are commonly regarded as the most stupid of all (ch. 33, 182b6-22). Sometimes, however, even the experts are deluded, as we can see from the fact

that they often fight about the terms used (ὀνομάτων). Take, for example, the discussion about the question whether in all their applications ‘what is’ (‘beingness’) and ‘what is one’ (‘oneness’) have the same meaning. Some people answer it in the affirmative, while others resolve the paradox of Zeno and Parmenides by saying that ‘one’ and ‘being’ are used in more than one sense (182b22-31).

Just as it is possible for the respondents to address the rebuttal of the opponent’s conclusion sometimes to the argument, sometimes to the questioner and his manner of questioning and sometimes to neither of these, likewise the opponens can address his questions and reasoning both to the initial thesis itself and to the respondents himself, as well as to the time of the disputation, whenever the solution needs more time than the present time allotted (καίρος) to leading the dispute to a resolution<sup>209</sup> (183a21-26).

### 5. 96 *Conclusion*

In the final chapter Aristotle reminds the reader of his programme in the *Topics*: to discover a faculty of reasoning about any theme set before us from the most generally accepted premisses there are: for this is the task of dialectic in itself and of peirastics in particular. But on account of its close affinity with the art of sophistry, we have added the means to defend our thesis. To this end, says Aristotle, we have gone over the subject of fallacies (ch. 34, 183a27-b15).

Next follow (183b15-184b3) some remarks about the genesis of the work. The author draws the reader’s attention to the circumstances (τὸ συμβεβηκός)<sup>210</sup> of this treatment. In all discoveries, he says, the outcome is either due to predecessors’ work that has been taken on by others and elaborated step by step, or else it came into existence out of original inventions, which usually make a progress that is small at first but more useful than the later developments resulting from them: for, as the saying goes, ‘the first start is the main part’. This is the way practically all arts have developed, e.g. in the case of rhetoric (183b15-34). As for the present treatment, nothing previously existed at all. The training given by the paid teachers of contentious argument consisted in handing out to their pupils

<sup>209</sup> *Top.* VIII, ch. 10.

<sup>210</sup> This passage presents a textbook case of the frequent use of συμβεβηκός to indicate something coincidental which, for the present time, deserves to be put at the focus of our interest. See my section 13.2 in Vol. II.

speeches to be learnt by heart, and that was it; in fact, they imparted to them not an art, but its products. Moreover, on the subject of rhetoric there already existed much material which had been enunciated in the past, while as far as reasoning is concerned, we had absolutely nothing else at our disposal but were for a long time forced to slog away at tentative researches (183b34-184b3).

An appeal to the reader's benevolence is invested in the author's expression of pride about his achievements. As Ackrill says, this passage strikes an unusually personal note, and blends justifiable pride with agreeable modesty.<sup>211</sup> If you will consider our achievement quite satisfactory, Aristotle says, as compared to traditional treatments, you should extend your pardon for the shortcomings of our system, while being heartily grateful for what has been discovered (184b3-8).

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<sup>211</sup> Ackrill (1981), 80. Possibly, this epilogue also has something of a mannerism about it like the rhetorical *captatio benevolentiae*.

## CHAPTER SIX

### THE PRIOR AND POSTERIOR ANALYTICS

The *Analytics*, which may be regarded as the final and most technical piece of Aristotle's works on logic, study (1) the conditions of valid deduction, in particular the syllogism, and (2) a special type of syllogism, the epistemonical or apodeictic syllogism, which is the strict form in which the mastery of genuine knowledge ought to be expressed in order to convince others of its truth. This is clearly stated by Aristotle in the opening lines (24a10-11): "Our subject-matter is apodeixis and knowledge obtained by it (ἐπιστήμη ἀποδεικτική)". From Alexander of Aphrodisias (fl. c. A.D. 205) onwards, these main parts were called *Prior* and *Posterior Analytics* (*APr.* and *APo.*). The common title '*Analytics*' should not lead us to disregard the important differences between the two works: the theory of epistemonical proof found in *APo.* ('deductive argument') is something decidedly simpler than the elaborate syllogistics spelt out in *APr.*<sup>1</sup>

In this chapter I shall discuss those items from the *Analytics* that are relevant to the present study of Aristotle's semantics and ontology, and at the same time representative of the basic issues of these works.<sup>2</sup>

#### 6. 1 *The Prior Analytics. Preliminary remarks*

Chapter 1 opens with some definitions. Thus not only the syllogism is defined and explained, but also its main components — premiss, and term.

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<sup>1</sup> Smith (1982) presents a wealth of evidence against the opposite view argued for by Ross (1949). Smith (1982a) makes a strong case for the view that "the doctrines of *Posterior Analytics I* were largely developed without the syllogistic, but restrictions on the sort of propositions appropriate to demonstrative sciences made it possible for Aristotle to leave much of this theory without subsequent revision" (*ibid.* 114). In point of fact, syllogistic is just one of the devices to make the procedure followed in deductive reasoning explicit; throughout Aristotle's philosophical works the procedure with the *qua* functor is more prominent; my sections 2.73-2.76.

<sup>2</sup> For the interrelationship between *APr.* and *APo.* see among others Barnes (1981), and Smith (1989), *Introd.*, XIII-XV. The modest role of prioristic syllogistics in Aristotle's strategy of argument is discussed in my section 2.73.



6. 11 *Premiss. Term. Syllogism*

A premiss (πρότασις) is an affirmative or negative statement of something about something. In accordance with *Int.* and *Top.*, the premiss, which divides into universal, partial, and indefinite, is considered one of a pair of contradictory dictums, something, that is, about which one disputant asks the other whether he assents to it.<sup>3</sup> Putting it briefly, a πρότασις always serves as a starting-point for an argument of whatever nature, epistemonical, dialectical (or even sophistical, for that matter).<sup>4</sup> In the opening lines of chapter 2 it is claimed (25a1-5) that every premiss is about the fact that something either actually falls, or must fall, or may fall to something else; of premisses of these three types some are affirmative and others negative with respect to each of these three modes of assignment; again some affirmative (and negative, respectively) premisses are universal, others partial, others indefinite.

Lukasiewicz criticizes Aristotle's use of the term ὄντα for what can be 'said of' something else (in Lukasiewicz's words 'predicates').<sup>5</sup> In *APr.* I, 27, Aristotle divides all things-there-are (τὰ ὄντα) into three classes:

*APr.* I 27, 43a25-43: Now of all the things there are (ἀπάντων δὴ τῶν ὄντων) (1) some are such as to be said of nothing else truly as a universal,<sup>6</sup> e.g. Cleon and Callias, the individual and perceptible, that is (καὶ τὸ καθ' ἕκαστον καὶ αἰσθητόν), but to have other things said of them (for each of these men is both a man and an animal); again, (2) some things are themselves said of others, but nothing superior is said of them; and, finally, (3) some are themselves said of others, and yet others of them, e.g. man of Callias and animal of man. Clearly, then, some things (those of group (1)) are naturally not said of anything; for as a rule each perceptible thing is such as to be said of nothing, save coincidentally (πλὴν ὡς κατὰ συμβεβηκός), for we do sometimes call the pale <thing> Socrates, or the approaching <thing> Callias. We shall explain in due time (πάλιν)<sup>7</sup> that there is also a limit in the upwards direction;<sup>8</sup> for the time being let us assume this. Of these ultimate items (of group (2)) nothing that is of a different nature

<sup>3</sup> *Int.* 7, 17a38-b16; 11, 20b23-30; *Top.* I 4, 101b15-37; 10, 104a3-37.

<sup>4</sup> *APr.* I 1, 24a16-b3; Ross (1949), 288f., henceforward referred to without the year.

<sup>5</sup> Lukasiewicz (1951), 5f.; Patzig (1969), 5-8, henceforward referred to without the year.

<sup>6</sup> Aristotle means to say that terms signifying certain individuals (e.g. 'Socrates' or 'this man') can only be used to stand for these individuals and, accordingly, cannot serve for designating other things.

<sup>7</sup> *APo.* I, chs. 19-22.

<sup>8</sup> Cf. *APo.* I 3, 72b11 and 22; 19, 81b32-33 and 36; 20, 82a22; 21, 82a36-37 and 82b11-35 (*passim*); 22, 83b30-84b1 (*passim*).

from them (ἕτερον) can be proved to be said of them— except by way of opinion — while these may be said of other things. Neither can individuals be said of other things, while things that are different (ἕτερα) are said of them. Clearly, things of the intermediate class can be spoken of in both directions: they may be themselves said of others, and others of them. Now, as a rule arguments and inquiries are concerned with these things.

Aristotle does not mean to say that things as such are said of something else. As is often the case, he speaks of things in so far as they are brought up by various names (appellations). Now things may be indicated by certain other names which are found in the same categorial column of being. Thus e.g. Callias (or some other member of class (1)) may be referred to as 'man' or 'animal' (saying 'this man' or 'Callias is a man'), in the same way as we can make use of similar logico-semantic relationships between 'man' and 'animal', calling a man 'this animal' etc.

However, there is an ultimate class of designations by which things may be indicated (class (2)) which cannot be replaced by any superior designation, because they are themselves the highest categorial names. Of them nothing can be said that is of a different nature (ἕτερον), except by way of opinion, when e.g. of the ousia it is said that it is a quantitative being. Individuals, on the other hand, that is to say, things when they are brought up in their capacity of being individual, can only be said of something else coincidentally, viz. if they are first called up by a coincidental designation; for example, when first calling up Socrates after his coincidental property of being pale, you may attribute 'being Socrates' to him, calling the pale thing 'Socrates'. Finally, of individuals not only other things (ἄλλα), i.e. various things from the same categorial column, may be said, but also different things (ἕτερα) — things, that is, found in non-substantial categories, such as 'being pale' said of Socrates.

A term (ὅρος) is defined (24b16-18) as that into which a premiss is analysed, namely both that which is assigned and that which it is assigned to, 'be' and 'not be' being appended to them. Ross (290f. ) has well observed that the vulgate reading (adding ἢ διαιρουμένων: 'or removed from them') must be incorrect, on philological grounds, such as procuring nugation. Without these words the text completely conforms with such passages as *Int.* 1, 16a16-18, where likewise 'addition' equally covers 'is' and 'is not'.

As for the word 'term' (ὅρος) two things deserve our special attention. First, the 'term' is commonly taken to be just a logical

tool.<sup>9</sup> Of course, Lukasiewicz is right that we should be careful not to identify this logical tool with such psychological or metaphysical words as 'idea', 'notion', or 'Begriff' in German. However, the expression 'just a logical tool' is equally misleading in light of Aristotelian thought. Aristotle's equation of the devices 'A belongs to B' and 'A is said of B' makes it patently clear that to him, even such variables are ambivalently used, to stand indiscriminately, that is, for both the terms and that which is conveyed by them. This being so, emphasizing that, properly speaking, not 'things', but terms are 'said of' ('predicated') should be counterbalanced by the equally legitimate statement that, not terms, but 'things' ('properties') are attributed to something/somebody.<sup>10</sup>

When speaking in chapter 4, of the role of the middle term in the syllogism, Aristotle (at 25b35) tacitly shifts from the masculine τὸν μέσον (b33: 'the middle term') to the neuter τὸ μέσον ('the middle'). It is clear from the context that by the latter he means the dictum intermediating between the intended assignment of a certain attribute to the substrate in question. E.g. if you are to prove syllogistically that every man is mortal, through the middle (term) 'corporeal', you are in fact dealing with the (incomplete) dictums, 'being a man', 'being mortal', and 'being corporeal', to make clear the truth of the dictum 'man's being mortal', once the mediating dictums, 'man's being corporeal' and 'the corporeal's being mortal' have been conceded.<sup>11</sup>

*APr.* I 4, 25b32-26a5: Whenever three terms (ὅροι τρεῖς) are so related to one another that the last term (τὸν ἔσχατον) is contained in the middle as in its whole, and the middle term (τὸν μέσον) is either contained in, or excluded from, the first [major] term as in or from its whole, respectively, there is of necessity a perfect syllogism concerning the extremes [viz. the (terms conveying the) substrate and attribute]. I call *that which*<sup>12</sup> is itself contained in another and contains

<sup>9</sup> Lukasiewicz, 3 and *passim*; Patzig, *passim*.

<sup>10</sup> For the general semantic rule (RIR) which for Aristotle any linguistic expression, whether simple or compound, stands neither for terms nor for things, but for the things *as conceived of* by the terms in question, see my section 1.71.

<sup>11</sup> Cf. I 23, 41a11-13 ("So we must take something midway between the two [viz. the substrate and the intended attribute]), which will connect the appellations (ὃ συνάψει τὰς κατηγορίας) [by which the substrate and the attribute are brought up], if we are to have a syllogism proving the assignment of this <attribute> to that <substrate>". We need not be surprised that throughout *APo.* we find the neuter τὸ μέσον, not the masculine ὁ μέσος.

<sup>12</sup> From here onwards, all nouns and pronouns are used in the neuter form. Notice that where genitive or dative cases are used, the difference between

another in it 'middle' (in position too *this comes in the middle*). By the 'extremes' I mean both *that which is itself* contained in another and that in which *another* is contained. For if A ['what is mortal'] is said of every B ['what is corporeal'], and B of every C ['what is man'], A must be said of every C. [...] But if *the first thing* follows every middle, but the middle thing falls to no instance of the extreme, there will be no syllogism concerning the extremes; for nothing necessary follows<sup>13</sup> from *these things* being the case.<sup>14</sup>

On several occasions it appears implicitly that when he uses the variables *A, B, C* etc., Aristotle takes them to represent simple states (such as 'being a man', 'being triangular' etc.), rather than as just terms ('man', 'triangle'). So in *APr.* I 25, the variables throughout are used to stand for premisses or conclusions. Likewise, *APo.* I 3, 73a7-10 (where Aristotle refers back to the above chapter of *APr.*) may be adduced in support of my view that even the word 'term' should not be taken to mean just a one-word expression, but a phrase composed of a term and the connotative 'be'. As a matter of fact, it is stated there that from 'positing one thing' (by which, Aristotle says, the positing of one term (ὅρος) or one thesis should be understood) nothing ever follows of necessity. Evidently, the 'one thing' is either an incomplete dictum, such as 'being an animal' or 'being white', or a complete one ('assertible'), like 'that an animal is white' ('or 'an animal's being white'). The remainder of this chapter is in full accordance with this interpretation of 'thing'.

Another important corollary from Aristotle's text should also be given due attention. It seems rather awkward to take the putative 'coupling' word 'is-not' as the 'copula' featuring between the subject and predicate term of a negative statement expressed by the well-known 'S is P' construal, because such a negative copula can hardly be regarded as 'coupling' the two terms. I take this as additional support for the view argued for in the present study that the form of the statement-making utterance is a dictum (composed of a substrate and an attributive term) to which the operator 'Is' or 'Is not' is appended (prefixed).<sup>15</sup>

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masculine and neuter does not come to the fore.

<sup>13</sup> Meaning: 'of necessity follows'. At times (but not often), Aristotle uses ἀνάγκαιον instead of ἀνάγκη. Patzig (1969), 17-21.

<sup>14</sup> Note that this clause, which is part of the definition of 'syllogism' (24b18-20), also clearly refers to a state of affairs, not outside things by themselves.

<sup>15</sup> My section 2.15.

The syllogism,<sup>16</sup> then, is defined and explained (24b18-22) thus: "A syllogism is an argument in which, certain things having been posited, some other than the things posited follows of necessity from their being so; by the last phrase I mean that this follows because of them, i.e. without any further term being required to render the conclusion unavoidable".<sup>17</sup>

This is a good account of what a valid argument is, but on the face of it, it is broad enough to cover all inferences, not only the kind of argument dealt with here. However the definition should be understood in the disputational context characteristic of Aristotelian logic.<sup>18</sup> Disputational logic requires something more than just logically valid inference; the disputant also needs effective protection against his adversaries, who not will hesitate to overthrow his position with all the help they can get. Thus a sober inference scheme will be the most appropriate. It will strike the reader that when it comes to defending his syllogistic, Aristotle makes use of a broader scala of inference types, such as proofs by conversion, transposition, or ecthesis, including the use of some laws of propositional logic.<sup>19</sup>

At 24b26-30, the wording of the premisses and the conclusion is explained. For B to be in A as in a whole is the same as for A to be said (κατηγορεῖσθαι) of all B; and A is said of all B when there is no B of which A will not be said; 'to be said of none' must be understood in the same way. The first-mentioned notion of inclusion is to be taken in terms of logical extension: all instances of being B are found in the extension of A. The 'said of' relationship can be understood in terms of logical intension: to being B the property of being A is universally assigned.

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<sup>16</sup> Smith (1990, *Introd.*, XV) has certainly a reasonable case in claiming that the English cognate 'syllogism' should be avoided for a host of reasons to make room for the neutral 'deduction', but on occasion (e.g. at *APr.* I, chs. 4-22) the rendering 'deduction' tends to conceal the special character of the kind of deduction dealt with. Hence I will take the liberty of switching between the two renderings.

<sup>17</sup> In *Motu an.*, ch. 7, 701a8-12, Aristotle says that in the case of thinking and inferring about the unshakable objects of true knowledge, "the end is intellectual vision (θεώρημα); for when one conceives the two premisses, one at once conceives of the conclusion and comprehends it as such" (ἐνόησε καὶ συνέθηκεν). Logical necessity will be discussed in the next section.

<sup>18</sup> A clear exposition of this context as governing Academic teaching is presented by Zekl (1997), *Einleitung*, XIX-XXVII, esp. XXI. Also my section 2.51.

<sup>19</sup> Lukasiewicz, 43-67; Patzig, 132-92.

6. 12 *The nature of the Aristotelian syllogism. Disputational necessity*

The Aristotelian syllogism is not an inference scheme, as current in traditional logic, of the form:

All men are mortal;  
Socrates is a man;  
therefore, Socrates is mortal.<sup>20</sup>

In fact, there are four telling differences. For one thing, the Aristotelian syllogism as discussed in *APr.* is not about individuals, that is to say, not in the same way as the above traditional specimen is.<sup>21</sup> Again, unlike the traditional syllogism, the Aristotelian one is not a compound of three sentences, the last of which is preceded by 'therefore' (as in the above example), to indicate that the third proposition follows from the preceding ones ('inference scheme'); instead it is an 'if ... then' implication, whose antecedent is the conjoint of the two premisses (which are combined by the connective 'and' into one (composite) sentence), while its consequent is the syllogistic conclusion. Thirdly, Aristotle uses (indeed was the first to use) variables (*A*, *B*, *G*, etc.) instead of concrete terms. Last but not least, he avoids the use of a copula and fashions alternative formulas, viz. instead of e.g. 'Every *B* is *A*' he has '*A* belongs (*ὑπάρχει*) to all *B*' or '*A* is said (*κατηγορεῖται*) of all *B*'.<sup>22</sup>

A key notion of the syllogistic procedure is 'necessity'.<sup>23</sup> It rightly features as a pivotal concept in the definition of the syllogism: the conclusion is said to follow by the very fact that the two premisses have been posited. This does not mean that the conclusion is a necessary sentence by itself; it may still be a contingent one, such as

<sup>20</sup> Lukasiewicz, 1-3; 20-3; Patzig, 3-15.

<sup>21</sup> Deductive arguments, on the other hand, do concern particulars in the first place; see Jacobs (1980, 421-7). This makes the use of the *qua*-locution most appropriate to framing them; my section 2.73.

<sup>22</sup> As early as in Antiquity, one was aware of the artificiality of Aristotle's manner of expression. E.g. Alexander of Aphrodisias CAG II-1, p. 54<sup>21-29</sup> (quoted in Patzig, 15, n. 22). Patzig (15, n. 20) is entirely wrong in claiming that in his discussion of negation, contradiction, and contrariety at *Int.* 7, 17b16ff., Aristotle always uses the copula. In fact, the idea of a copula is quite alien to Ancient logic before Ammonius (c. 500 A.D.); my sections 1.51 and 2.12.

<sup>23</sup> Dealing (1985, 208-18) with the various kinds of necessity in Aristotle, Dorothea Frede (209) rightly remarks that it is by no means clear whether Aristotle regarded syllogistic necessity as separate from the other kinds of conditional necessity. Indeed, one should always consider the disputational setting of the debates, even the 'scientific' ones, in Aristotle.

in e.g. 'If being white is said of every bodily thing and being a stone is said of every landmark, then being white is said of every landmark'.

Aristotle has well observed the distinction between the necessity of the consequent (conclusion) and the necessity of the consequence (inference). He defines (10, 30b18-40) the difference as one between what he calls 'absolute' and 'relative' necessity (*ἀπλῶς ἀναγκαῖον* and *τούτων ὄντων ἀναγκαῖον*), the latter being a "necessity which exists if or as long as some other things are the case", as opposed to a necessity *simpliciter*.<sup>24</sup>

Patzig (16-42) extensively argues against this way of defining the difference. It is quite plain, he claims (17), that these are two quite independent 'necessities', and that it can, for example, be necessarily true (in virtue of certain premisses) that something belongs to a subject, and also possibly true (in virtue of certain other premisses) that it belongs necessarily to the subject. He considers it feasible to offer as a brief account of Aristotle's position that the 'relative' necessity appearing in the formulation of a syllogism is conveyed not by the simple word 'necessarily', but by the entire expression 'If ... then necessarily'; whereas to signify 'absolute' necessity the word 'necessarily' is used without qualification.

Patzig (22-9) further claims that Aristotle's distinction between 'relative' and 'absolute' necessity depends on a profound misunderstanding of the phenomenon Aristotle calls 'relative necessity'. Whenever Aristotle makes this distinction, he always takes it as one between two species of one and the same kind of necessity. In Patzig's view, however, Aristotle is wrong in doing so, because this entails a muddling of two different kinds of operators. The 'relative' operator governs the conclusion qua conclusion, while the 'absolute' operator governs the conclusion not qua conclusion, but taken as an independent proposition. To Patzig, Aristotle's presentation, therefore, is "systematically misleading".<sup>25</sup> By stipulating that the 'relatively'

<sup>24</sup> *APr.* I 10, 30b30-33; b38-40: "Hence, under these conditions [i.e. these premisses being posited] the conclusion will be necessary, but it is not necessary in an unqualified sense"; cf. *APo.* II 5, 91b14-17 and II, 94a21-27.

<sup>25</sup> "Aristotle's distinction between 'relative' and 'absolute' necessity is systematically misleading; it ignores the difference between the necessary truth of an implication and the necessity of the fact expressed by the consequent" (23). However, Aristotle quite carefully distinguishes between 'necessitas consequentiae' and 'necessitas consequentis'. For Aristotle's (supposed; see Patzig, *ibid.*) corresponding error "plainly underlying" his "notorious assertion that statements about the future are not subject to the law of excluded middle" as (putatively) presented in *Int.* ch. 9 see my section 3.6. Barnes (1975), 112f.; (1994), 111, is even of the opinion that

necessary propositions are only necessary if certain conditions are fulfilled, Aristotle seems to imply that a 'relatively' necessary proposition, when the conditions relative to which it is necessary are fulfilled, must be necessary in the same sense as an 'absolutely' necessary proposition is necessary, as it were from the cradle. And this, Patzig (23) claims, is obviously not the case.

I am afraid it is Patzig's presentation which is 'systematically misleading'.<sup>26</sup> Let me explain. Patzig fails to see that the basic sense of the two necessities is rooted in the ins and outs of disputational practice.<sup>27</sup> Whoever wants to defend a proposition should force the other disputant to concede it, without leaving him any escape. Now the proposed thesis is inescapable if it *either* concerns an analytical or self-evident truth (such as 'that the angle-sum of a triangle is equal to two right angles' or 'that a man is an animal'), or syllogistically follows from two — I do not say: 'true premisses' but — premisses *conceded as true* by the fellow disputant.<sup>28</sup> In both cases there is no escape at all for the poor fellow. These two forms of necessity have

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Aristotle never satisfactorily distinguishes between propositions which express truths which are necessary (e.g. 'Every man is an animal') and propositions which express the necessity of certain truths ('Necessarily: every man is an animal'). Elsewhere Barnes (1975, 127; 1994, 129f.) claims that Aristotle (at *APo.* I 6, 75a22ff.) is evidently trying to formulate the distinction between *necessitas consequentiae* and *necessitas consequentis*, but does not succeed.

<sup>26</sup> To avoid any misunderstanding of his own use of this qualification Patzig (23) says: "The phrase 'systematically misleading' is not meant as a vague accusation; it is meant to describe Aristotle's terminology: in philosophy it is not infrequently found that some fact, patently true but difficult to describe with precision, has been expressed in such a way that what was intended as a simple description entails consequences which the fact itself by no means warrants".

<sup>27</sup> The same can be said of Patzig's claim (134) that "there is an inconsistency between Aristotle's *doctrine* that every proof must be in syllogistic form and his *practice* of deducing the imperfect from the perfect syllogisms with the help of certain non-syllogistic (propositional) laws". In point of fact, Aristotle merely claims that the only effective way to rebuke the adversary's artifices in disputations is the use of the syllogism. His own philosophical practice, including the proofs of the validity of the syllogistic procedure, is of a broader range. For the general background of disputational practice see my section 2.51.

<sup>28</sup> It is often said (e.g. Lukasiewicz, 44; Patzig, 136) that Aristotle believed the syllogism to be the only possible form of proof. This is not true, though Aristotle did consider the syllogistic the only conclusive way of proving or disproving a position in a disputation. The opinion held by Lukasiewicz and Patzig is the more remarkable as both recognize the value of other kinds of proof applied by Aristotle in this very treatise, such as his use of the law of hypothetical syllogism and other laws of propositional logic. For that matter, both in the *Organon* and elsewhere, such as in the *Metaphysics*, Aristotle meticulously argues along non-syllogistic lines, and explicitly defends such lines of argument. In addition, prioristic syllogistic plays only a modest role in Aristotle's strategy of argument; my sections 2.73-2.76.



the same nature, viz. disputational inescapability,<sup>29</sup> and the subject matter of both is the inescapability of the conclusion *either* qua self-evident or qua nicely following from the premisses conceded by the adversary.<sup>30</sup>

On this interpretation, Aristotle's distinction between 'absolute' and 'relative' necessity is quite justifiable.<sup>31</sup> Moreover, along these lines it is entirely understandable that even false premisses, once they have been conceded, necessarily produce the conclusion intended by the defender. By the same token, the association of 'as soon as some things are the case' (by admission, that is) with 'relative necessity' is clear; formally speaking, 'these things being so' (τούτων ὄντων) must be understood in terms of *being admitted* by the adversary, since their being so in the outside world is not material to the conclusion.<sup>32</sup> Finally, perhaps we are not on the wrong track pressing, in this

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<sup>29</sup> I think on this interpretation Ackrill's worrying (1963, 133) about Aristotle not sharply distinguishing between logical and causal necessity (because he treats laws of logic and laws of nature as on a par) loses much of its point. Ackrill's statement is quite right (as is also patently clear from Aristotle's treatment of the 'because' (διὰ τί) device in *APo.*), but his putting the two laws on a par does not affect disputational inescapability.

<sup>30</sup> Note that the absolute necessity discussed in *APo.* I, ch. 6 (74b26-75a14), is what falls to the logical state of affairs ('dictums'), not the outside things involved in it, since it is, Aristotle claims, the logical nexus between the substrate and the attribute which is necessary, whereas the beings conveyed by them may be contingent.

<sup>31</sup> Mignucci (1965, 251) rejects Patzig's view, but seems to go too far by denying that Aristotle's distinction between absolute and relative necessity should be concerned with two different modes of necessity. From the viewpoint of disputational practice, they *are* different modes. Gaskin (1996, 51) thinks that it is simply not possible to establish whether, when Aristotle talks in the *Analytics* of hypothetical necessity, he has in mind 'necessitas consequentis' or 'necessitas consequentiae'. To my mind, you should instead think of 'necessitas consequentiae' *in terms of disputational necessity*.

<sup>32</sup> Patzig (24) tacitly takes the phrase τούτων μὲν ὄντων (*APr.* I 10, 30b33) to mean 'if the premisses are true', thus ignoring that in the definition of syllogism (at I 1, 24b18-20) there is talk of *positing* things *as true*. The text of the passage (30b31-40) runs: "Further one might show by an exposition of terms that the conclusion is not necessary without qualification, though it is a necessary conclusion, once the premisses have been posited. For example, let *A* be animal, *B* man, *C* white, and let the premisses be assumed to correspond to what we had before (30a23-33): it is possible that animal should fall to nothing white. Man then will not fall to anything white, but not necessarily; for it is possible for man to be born white, not however so long as animal falls to nothing white. Consequently, under these conditions the conclusion will be necessary, but it is not necessary without qualification". Reasonably, the phrase "as long as animal falls to nothing white" can only be taken to mean 'as long as someone *is positing* that animal falls to nothing white', since otherwise 'as long as' will not refer to any time at all, which would make the aforesaid 'possibility' a mere fake.

context, not only the strong connotation of the word ἀνάγκη ('force', 'constraint', 'compulsion', as well as the need or embarrassment resulting from it), but the formula 'If B is said of ...' as well. From *Mel.* we know that even the mother of all starting-points, the inescapable law of non-contradiction (LNC), is powerless if our opponent refuses 'to say anything meaningful'.<sup>33</sup>

## 6.2 *Focalization and categorization in Prior Analytics*

The devices of focalization and categorization, which are characteristic phenomena in Aristotelian semantics, are frequently applied in *APr.* and *APo.*, both in so far as the conclusive syllogistic figures and moods<sup>34</sup> are concerned and in the special procedures adhibited by Aristotle to prove the validity of the so-called imperfect figures two and three.

### 6.21 *How to frame conclusive premisses*

In chapter I 23 of *APr.*, where the need of a mediating 'middle' or 'medium demonstrationis' (41a11: τι μέσον) is argued for, the role of correctly categorizing the middle is evident (my section 2.72). In I 28 Aristotle presents rules for framing categorical syllogisms with respect to various problems.<sup>35</sup> For example, if you want to prove syllogistically the universal affirmative, 'Being A belongs to all being E', you have to look for the substrates (ὑποκείμενα) to which the attribute 'being A' itself happens to apply, and the attributes which follow 'being E'.

<sup>33</sup> My section 7.72. — On the interpretation of Aristotle's terminology presented here, Patzig's claim (25) is invalid, that Aristotle's systematically misleading terminology even "leads to a contradiction within Aristotle's text itself" (at *APr.* I 10, 30b31-40), since Patzig fails to understand by 'as long as animal belongs to no white', in terms of disputational argument, 'as long as someone is *claiming or conceding* that animal belongs to no white'. Instead Patzig replaces the phrase 'as long as' simply by 'if', and takes it to introduce a statement about a real situation. Remarkably enough, Patzig (149) shows a full understanding of the impact of the eristic or disputational origin upon Aristotle's logical theory, when it comes to explaining the genuine nature of the manoeuvre called the 'syllogism by way of the impossible'.

<sup>34</sup> A mood ('modus') is an ordered sequence of the premisses and the conclusion. Aristotle recognizes three different arrangements of pairs of premisses which determine his three syllogistic figures. *APr.* I, chs. 4-6. Lukasiewicz, 23-8; Patzig, 88-105.

<sup>35</sup> This chapter is aptly commented upon by Ross (1949), 385-91; Lukasiewicz, 23ff.; Smith (1989), 152-4.

Now if any of the former is the same as one of the latter, the attribute, 'being A' must apply to all that which is E (43b39-43). The different steps by which this mood (in fact, the first one of the first figure, *Barbara*) is framed are the following:<sup>36</sup> First you have to draw a list of universal statements which have the terms 'being A' and 'being E' as their substrates or attributes. This list will contain four types of universal affirmatives, 'Being B belongs to all being A', 'Being A belongs to all being C', 'Being Z belongs to all being E', and 'Being E belongs to all being H', supposing that the modes of being signified by each of the terms, B, C, Z, and H meet the aforesaid conditions. When you find, then, among the things brought up as 'being C' something identical with those brought up as 'being Z', you will get two premisses having a term in common, say, 'being Z', which run 'Being A belongs to all being Z' and 'Being Z belongs to all being E'; and these two are productive of the intended syllogistic conclusion, 'Being A belongs to all being E'. Thus the mood *Barbara* comes about in which 'being A' is the major term, 'being E' the minor, and 'being Z' the middle term.

A similar procedure is recommended for syllogistically proving partial affirmatives and universal and partial negatives (43b43-44a36). In the remainder of the chapter five evident conclusions concerning the proper syllogistic procedure are drawn — in the paragraphs 44a36-b5; 44b6-24; 44b25-37; 44b38-45a16; 45a17-22. The upshot of the first passage (44a36-b5) is that whenever you can find a list of middle terms between the substrate, say, that which is E, and the attribute, say, 'being A' of the thesis you intend to prove ('Being A belongs to all that which is E'), the preferable middle term to use in framing the appropriate syllogism is that which, in matters of commensurate (καθ' ὅλου)<sup>37</sup> applicability, stands nearest to 'being A'.<sup>38</sup> In Aristotle's words:

*APr.* I 28, 44a36-b5: It is plain, then, that with respect to each and every thesis proposed (πρόβλημα) we must look for the aforesaid <relationships existing between the substrate and attribute in question>; for all syllogisms proceed through these. In addition, when seeking consequents and antecedents <to the various modes of being occurring in these relationships>, we must look for those which are primary (τὰ πρῶτα) and the most universal (τὰ καθ' ὅλου μάλιστα).

<sup>36</sup> Lukasiewicz, 24.

<sup>37</sup> For my reading καθ' ὅλου ('commensurately') instead of καθόλου ('universally') see my sections 6.34 and 6.71.

<sup>38</sup> Ross (1949), 388f.

For example, with reference to the substrate which is E, we must look for the universal property of being KZ rather than to 'being Z' alone, or with regard to the intended attribute, 'being A', we must look for 'being KG' rather than to 'being G' alone. For if 'being A' belongs to 'being KZ', then it belongs both to 'being Z' and 'being E', whereas if it does not follow 'being KZ', it still is possible for it to follow 'being Z'. Likewise we must observe the antecedents of the intended attribute, 'being A' itself; for if a certain mode of being follows a thing's primary mode of being it will also follow what is secondary to its primary mode of being, but if it does not follow the former it may still follow the latter.

The purport of this passage is this: If one is after a syllogistic proof of the universal applicability of 'being A', say<sup>39</sup> 'having the sum-total of two right angles' or 'being 2R', to what is E, say, a tympanum,<sup>40</sup> one must conceptually analyse both the notion 'being a tympanum' and that of 'being 2R' in such a way as to discover a middle term between these two which precisely singles out from each of these notions that mode of being which commensurately connects one to the other, leaving aside more specific modes of being which do apply, but are not primary.

Supposing you want to present a syllogistic proof that the tympanum of a certain temple is a rectilinear mathematical figure having the sum-total of two right angles, you have to prove the universal thesis "'Being 2R' universally belongs to what is a tympanum". Now you have to start by conceptually analysing the two notions with a view to their mutual logical relationships, which will lead to the following statements:

Being an isosceles universally belongs to a tympanum;  
 being triangular universally belongs to being an isosceles;  
 being 2R universally belongs to being a triangle;  
 therefore, being 2R universally belongs to being a tympanum.

Next, we have to select the more appropriate premiss containing that middle term which precisely conveys the commensurate property pivotal to assigning 'being 2R' to 'being a tympanum'. Now though 'being an isosceles' is a quite essential property of a tympanum, when taken by itself, it will not do the job of being intermediate between

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<sup>39</sup> Neither Aristotle nor the commentators come up with examples, the latter being hampered, I am afraid, by their mistaking the two-words phrase καθ'ὅλου for the one-word expression καθόλου.

<sup>40</sup> Taking 'tympanum' in its architectonic sense: 'the recessed, usually triangular space enclosed between the horizontal and sloping cornices of a pediment, often decorated with sculpture'. The example is mine.

'being a tympanum' and 'being 2R' properly, so you have to analyse it into 'being an isosceles *triangle*', and then reduce this to 'being a triangle', because it is triangularity that commensurately links 'being 2R' to 'being a tympanum'. Thus our syllogism should run:

Being 2R universally belongs to being triangular;  
 being triangular universally belongs to being a tympanum;  
 therefore, being 2R universally belongs to being a tympanum.

In this fashion it has been syllogistically proved, using the most appropriate middle term, that the tympanum of our temple is a rectilinear mathematical figure having the sum-total of two right angles. Q.E.D.

Evidently, the entire procedure hinges on precisely focussing on that property which is crucial for cogently assigning the intended attribute ('being 2R') to the substrate in question ('that which is a tympanum'), and, then, categorizing it accordingly.

That this method is the proper way to go about framing syllogistic proofs can be gathered not only from Aristotle's practice of framing premisses, but also from explicit statements to that effect.<sup>41</sup> The search for appropriate middles is expressed in terms of categorization at *APr.* I 23, 41a2-4: "For in general we established [I 4, 25b32ff.] that there will never be any syllogism proving one thing of another, unless some intermediate thing (τινὸς μέσου) is taken which is somehow related to each of them in terms of categorial assignment (ταῖς κατηγορίαις)".<sup>42</sup> In the subsequent lines (41a4-14) this issue is clarified by sketching the intended relationships in more detail: A syllogism relating *this* to *that* proceeds through the premisses which <more precisely> do the same thing. Now it is impossible to take a premiss relating *A* to *B* by, instead of taking something they have in common, affirming or denying some attributes that are quite peculiar to each of them. So we must take some attribute in between the two, which will connect the initial designations of *A* and *B*, if we are to arrive at a syllogism relating *A* to *B*.

In our discussion of the epistemonik procedure developed by Aristotle in *APo.* I shall argue for the thesis that all proofs eventually bear

<sup>41</sup> E.g. at *APr.* I 4, 25b32-26a16 in terms of the explicit formulation of the transitivity rule of *Cat.* 3, 1b10-24.

<sup>42</sup> Lit.: 'by the <respective> designations <by which they are brought up>'. Smith has (1989, 141) a conspicuous but ill-founded remark on this use of κατηγορία: "The 'predications' here are simply the types of categorial sentence. In *APr.*, Aristotle usually uses the term 'problem' to express this". Such misunderstandings are entirely due to one's mistaking the onomastic use of terms for their apophantic use.

on concrete states of affairs, concerning particulars of the outside world. In light thereof, we are allowed to say that, though, formally speaking, the Aristotelian syllogism is not about singulars, it is ultimately directed to clarifying concrete, singular states of affairs. Speaking, for instance, of a certain tympanum, the object is, as it were, tailored to the syllogistic procedure by universalizing it from its thisness ('this thing, which is a tympanum') to 'what is a tympanum'.<sup>43</sup>

In *APr.* I, chs 30-32 the framing of proper premisses, with the 'most appropriate' middle terms, is further worked out by giving rules proper to the various arts and disciplines, including philosophy. Again and again, we must scrutinize the various logical relationships existing between the different appellations one may bring up of the substrate and the attribute involved in the thesis to be proved syllogistically. At 46a10-17 Aristotle refers to this logical procedure in terms of observing the nature of the starting-points of the syllogisms to be framed, and seeking how we must hunt out (θηρεύειν)<sup>44</sup> them. This procedure is laid down precisely to prevent us from looking at random for all that can be said about the two things in question (substrate and attribute) as they are called up by the initial terms, and to make us confine ourselves to the attributes that are the most appropriate to the syllogistic proof intended.

## 6. 22 *The proofs ἐξ ὑποθέσεως. The role of correct categorization*

In chapters I, 4-6, Aristotle discusses fourteen syllogistic moods divided into three figures. The four moods of the first figure are

<sup>43</sup> No doubt, the ambivalence of the expression 'that which is a tympanum' is something to do with this. This universalization process is called ἐπαγωγή ('induction'), which, taken in its focal meaning, applies to any argumentative procedure producing insight into some universal aspect of things as the result of attending to the particulars in which it is instanced. This was aptly formulated by Wieland as early as 1962 (95). Along the same line of thought, Engberg-Pedersen (1979, 305) describes Aristotelian 'induction' (of which he distinguishes six different types) as basically a process of "acquiring insight into some universal point as a consequence of attending to particulars". My sections 2.53-2.56.

<sup>44</sup> This expressive term seems to be Aristotle's favourite for pointing out the idea of procuring the appropriate components of an argument. Cf. *APo.* I 14, 79a24-25, 31, 88a3-4, and II 13, 96a22-23, where this verb is used for acquiring a thing's essential attributes; in *Met.* K 6, 1063a14, it is used for pursuing the truth by starting from changeless things, while at *Met.* M 8, 1084b24 it refers to the erroneous (Platonic) method of simultaneously hunting for data from mathematics and those deriving from supra-disciplinary universal definitions, in order to discover the first principles of things. At *Rhet.* II 21, 1395b4, the hunting down of maxims expressing a universal truth is denoted by this verb.

called 'the perfect ones', because, unlike those of the second and third figure, which are equally valid, they are self-evident reasonings. Since the validity of the various moods of the second and third figure is not evident, they must be proved.<sup>45</sup> This proof (ἀπόδειξις) is differentiated into the one using conversion (I 6, 28a28),<sup>46</sup> those making use of what is commonly called a 'reductio ad impossibile' (I 5, 27b3; I 6, 28a23; I 8, 30a9),<sup>47</sup> and the proof by ecthesis (I 6, 28a23).<sup>48</sup>

As a matter of fact, these proofs are *inter alia* based upon a set of theorems of propositional logic, which are like many non-syllogistic laws, such as:

'If the propositions *A* and *B* imply a proposition *C*, then, if *D* and *E* imply *A* and *B*, and *C* implies *F*, *D* and *E* imply *F*.'

Such laws enable him to 'reduce' imperfect moods to perfect ones.

Patzig (134) is quite right in claiming, *pace* Lukasiewicz (1951, 74), that the reduction meant here is not a "proof or deduction of a theorem from the axioms", but rather a procedure for transforming imperfect syllogisms into perfect ones. This procedure is not a proof, but rather the generation of a perfect syllogism from an imperfect one. This being so, the several kinds of transformation are not meant to prove that the conclusion of the imperfect mood can alternatively be derived by means of a first figure mood (as is often said)<sup>49</sup>, but that the imperfect mood is valid.

In its simplest form this transformation is brought about by merely converting a premiss, so that Aristotle can truly say that "the conversion (sc. of a premiss of a second figure mood) produces the first figure", which means that a new argument is produced from the imperfect one.<sup>50</sup> The conversion rules are dealt with in chapter I, 2.<sup>51</sup>

A more complicated way of transforming an imperfect mood into a perfect one is the proof 'per impossibile' (διὰ τοῦ ἀδυνάτου).<sup>52</sup> This

<sup>45</sup> See for this subject the outstanding chapter 'Reduction and Deduction' in Patzig, 132-92.

<sup>46</sup> Such a proof is applied by Aristotle in *APr.* II, chs. 8-10.

<sup>47</sup> Applied in *APr.* II, chs. 11-15; cf. 'reciprocal proof' in II, chs. 5-7. Cf. II, chs. 17-18.

<sup>48</sup> *APr.* I, chs. 6 and 8; II 4.

<sup>49</sup> Maier (1900), 82-8. For the telling difference between these moods see Patzig, 146ff.

<sup>50</sup> *APr.* I 7, 29a33-34; cf. 29a30-32; 5, 27a12 and a 36; 6, 28a22 and b34. Patzig, 135f.

<sup>51</sup> Lukasiewicz, 91-4; Patzig, 137-44.

<sup>52</sup> *APr.* I 23, 41a22-b1; 29, 45a23-b20; 44, 50a16-b4; II 11, 61a18sq.; *APo.* I 11,

proof is an instance, indeed the most important one,<sup>53</sup> of what Aristotle calls<sup>54</sup> the ‘syllogisms from a hypothesis’, which are the sole ways of proving the validity of a syllogistic mood in cases in which a deictic way by conversion of premisses will not be possible.<sup>55</sup> These syllogisms all start from an assumption (ἐξ ὑποθέσεως).

The first type of such syllogisms occurs in cases in which a certain proposition *A* is to be proved which cannot be proved right away. Then it must first be agreed by the disputants that *A* must hold, if another proposition *B* can be proved. This agreement and the use of it, constitute the non-syllogistic part of the intended argument, while its syllogistic part consists in the proof of the substituted proposition *B* (τὸ μεταλαμβανόμενον). Once *B* has been proved, *A* follows in virtue of the arrangement (διὰ συνθήκης, δι’ ὁμολογίας, ἐξ ὑποθέσεως). For example (50a19-28), if we want to prove that not all contraries are objects of a single discipline (= *A*), we first make our opponent agree that the truth of *A* follows from the truth of *B*, running ‘not all contraries are actualizations of one single potentiality’. Once this arrangement has been made — viz. that if we will succeed in arguing for the truth of *B* the opponent will concede *A* right away — we can proceed to reason syllogistically thus: health and disease are not actualizations of a single potentiality (since the same thing cannot be both healthy and diseased); now, health and disease are contrary states; therefore, not all contraries are actualizations of a single potentiality. Finally, in virtue of the agreement the opponent has to grant the truth of *A*.

In chapter I, 29, 45b15-19, it is claimed that in arguments proceeding by substitution (κατὰ μετάληψιν), and in arguments *a fortiori* and *per analogiam*,<sup>56</sup> the inquiry will be directed to the analysis of the logical relationships between the substitute terms; and this inquiry must go along the same lines as that directed to the terms of the

77a22-25. Ross (1949), 31f.; Lukasiewicz, 54-9; Patzig (1969), 144-56; Smith (1989), *Introd.* XX-XXII; 115f.; 141f.; 154f.; 198-201.

<sup>53</sup> It is applied by Aristotle in *APr.* II, chs. 11-15.

<sup>54</sup> *APr.* I 23, 40b25-26; 41a36-b1; 29, 45b15-18.

<sup>55</sup> For the distinction between ‘syllogisms per impossibile’ (which are themselves a sub-set of ‘syllogisms ἐξ ὑποθέσεως’) and ‘deictic syllogisms’, which deduce ‘directly’ the proposition they are to prove, see *APr.* I 7, 29a31 and 29, 45a26; II 14, 62b29-63b21; cf. 23, 40b25-26. Patzig, 149f.; Smith (1989), 155; 175f. Van Rijen (1989, 36-50) presents an extensive discussion of the proof *per impossibile* in terms of the distinction between absolute and qualified modalities.

<sup>56</sup> Ross (1949), 394 (following Alexander and Philoponus).



original syllogism. This means that such an inquiry should likewise proceed from a proper categorization.

The other type of proof 'by assumption' is the syllogism 'per impossibile'. This proof, too, starts from a hypothesis, this time not one based upon an agreement between the disputants, but the assumption that of two premisses from which an obviously false conclusion follows, the one which was posited in the original syllogism as a true premiss, must be false, and its contradictory true. Aristotle is rightly of the opinion that this assumption "need not be expressly agreed by the disputants, because the falsity of the newly framed premiss is patently clear".<sup>57</sup> By this kind of proof the validity of a syllogistic mood is proved by combining the contradictory of the conclusion with one of the original premisses, the result being that these two entail the contradictory of the other premiss. Ackrill (1981, 87) is right in regarding this as "notably a kind of *reductio ad absurdum* argument". We have to realize, however, that the argument hinges not on the original premiss *being true*, but its being *posited* beforehand *as being true*. So the absurdity consist in contradicting oneself by supposing the conclusion to be false, and this must be repulsive to the adversary, who had earlier conceded the original premiss, which is now 'falsified'. Once again, things should be judged in their disputational context.

In the same chapter I, 29, Aristotle sets out to make clear that, like the regular syllogism, the syllogisms which lead to impossible conclusions are similar to the deictic (or ostensive) ones. This is to say, they too are framed by means of looking for the appropriate appellations logically following or preceding the original names by which the substrate and the attribute of the thesis to be proved were brought up (45a23-36). Once again, correct categorization is in order, to guarantee the selection of the appropriate middle terms.

As in the case of the proof 'per impossibile', with the former type of proof by assumption, viz. the proof proceeding by previously making an agreement on account of a certain substitute proposition, categorization plays an important part in the procedure. To take the example mentioned above, when you bring up the contrary states, health and disease, as actualizations of two *different* bodily potentialities, you have to defend a rather strange view of 'potentiality', as

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<sup>57</sup> *APr.* I 44, 50a32-38. Ross, 31f.; Patzig, 149f. The logical (non-syllogistical) laws involved are discussed in Patzig (1969), 151-6.

though the potentiality in question is not the susceptibility to contrary bodily states, but the susceptibility to simultaneously possessing two contrary bodily states. The latter view implies an abstruse idea of the important metaphysical item of 'what is potentially' (τὸ ὄν δυνάμει).<sup>58</sup> For that matter, in I, ch. 34, a similar problem concerning health and disease (described, this time, the other way round, taking actual health and actual disease as mutually exclusive) will be solved in terms of confounding the connotative and denotative uses of terms signifying a property (48a1-23).

#### 6. 23 *Some general remarks on the device called 'exposition' (ἔκθεσις)*

The third method Aristotle sometimes makes use of is called ἔκθεσις. It surely plays only a minor part in Aristotle's logic. There is some confusion about the nature of the proof 'by exposition' as a means of proving the validity of an imperfect syllogistic mood. It is sometimes said that Aristotle accorded only a restricted value to ecthesis as a method of proof.<sup>59</sup>

The first thing worth noting is that the notion of ecthesis has a far broader range of uses than just to refer to the proof by exposition. Let us first sketch how Aristotle uses this notion.<sup>60</sup>

In ordinary Greek the words ἔκθεσις and ἐκτίθεναι are used to stand for the exposure of children,<sup>61</sup> or the disembarking of somebody,<sup>62</sup> or for exhibiting publicly or exposing to view or for sale etc.<sup>63</sup> These uses frequently go with the connotation of making something conspicuous. To my mind, the different technical uses of ecthesis all have the connotation of 'exhibiting', 'extrapolating', 'singling out',

<sup>58</sup> Ross rightly speaks (1949, 31, n.3) of a bad reason, which is only meant to be dialectical.

<sup>59</sup> Maier (1900), II 2, 147; Lukasiewicz (67), who none the less was of the opinion (59) that, although of little interest for the system, these proofs have an interest in themselves. In his very instructive discussion of ecthesis (156-68) Patzig has remarked (157) that the proof by exposition is not only used as an alternative one to transformation, but is also the only one available for proving the validity of two moods of his modal logic (*APr.* I 8, 30a6-16, discussed in Patzig 1969, 165-7).

<sup>60</sup> See the fine overview in Patzig, 158f., which I will draw heavily upon. Cf. Smith (1989), *Introd.*, XXIII-XXV; 112; 118-22; 130; 152f.; 170; 173f.

<sup>61</sup> Herodotus I, 112 and 116; Euripides, *Ion*, 344, 951, 956; Aristophanes, *Clouds*, 531.

<sup>62</sup> In this sense the word ἔκθεσις is used by Aristotle in *Poet.* 24, 1460a36 to describe the setting-ashore of Odysseus on the shores of Ithaca by the Phaeacians. At *Part.* II 7, 827a27-28 the substantive is used to describe the (simultaneous) coming out (μὴ ἐκθέσει) of leaves and fruit.

<sup>63</sup> Liddell & Scott, s.v. ἐκτίθημι II 2-3.

‘setting apart as distinctive’. So in *Met.*, the Platonists’ way of singling out the forms and exalting them as Forms dwelling in a transcendent Domain over and above the outside world is called *ecthesis*.<sup>64</sup> Patzig (159) is right in emphasizing that, rather than the more influential term χωρισμός and the Neoplatonic υπόστασις, the word ἔκθεσις captures the extrapolation of a thing from its original context, and hence, in Aristotle’s criticism of Plato, the artificial extraction of the *eidos* from its connection with the outside particulars.

As for the logical uses, *ecthesis* is used to stand for:

- (a) The exhibition of relevant instances, to support a general view. Thus at *Met.* Z 6, 1031b21, the word is used for the exhibition of particular instances in support of the metaphysical thesis that a thing’s ‘*this*-ness’ and its quiddity are one and the same thing.<sup>65</sup>
- (b) the extrication of three proper terms from the linguistic web of an argument which is to be tested for logical validity or put into normal syllogistic form. So in *APr.* I, 33-43, Aristotle discusses how to single out things according to the appellations which are the most appropriate for correctly framing a syllogism.
- (c) the proof by *ecthesis* showing the validity of an imperfect syllogistic mood; see the next section.

Only the uses under (b) and (c) are of importance to us now.

#### 6. 24 *Ecthesis as the extrication of the proper syllogistic terms*

After he has declared (in *APr.* I, 30) how to differentiate the general rules for correctly framing syllogistic proofs to adapt them to the various disciplinary uses (including those for the sake of philosophy), and criticized (I, 31) Plato’s rival method of division (διάίρεσις) as a poor means of proving a thing’s essence,<sup>66</sup> Aristotle goes on to present (I, 32) more detailed and exemplified rules for the choice of premisses, particularly the middle term and the appropriate figure.

<sup>64</sup> *Met.* A 9, 992b10; and the verb at B 6, 1003a10; M 9, 1086b10; N 3, 1090a17.

<sup>65</sup> Cf. *APr.* I 10, 30b31.

<sup>66</sup> The Platonic method of division is illustrated in *Sophist* 219Aff. and *Statesman* 258Bff. Division, Aristotle claims (46a32-34), is a sort of weak syllogism, for it begs the point at issue, and only proves that a higher attribute applies to the thing under examination. In similar critical tones the Platonic method of inquiry is reviewed in *Met.* (A 6, 987b22-35; Θ 8, 1050b8-1051a3; Λ 1, 1069a25-30; N 1, 1087b4-21). The method is basically censured as a method of proof in *APo.* II, 5, while at II 13, 96b25-97b6, the method of διάίρεσις, when applied according to a thing’s differentiae, is said to be useful for inferring a thing’s quiddity, as a safeguard against omitting some essential features.

The latter chapter is followed by an extensive discussion (I, chs. 33-43) of possible errors we may commit in framing appropriate syllogisms, and of the special stumbling-blocks one may find on one's way in this respect.

Although the technical terms ἔκθεσις and ἐκτίθεναι are not frequently used in these chapters, the general idea of extrication or extrapolation of appropriate appellations plays an important part throughout chs. 33-41.

The first error which could threaten the procedure happens if one assumes that, given that an attribute applies in one respect, it applies in an unqualified sense. For example, let *C* stand for 'being Miccalus', *B* for 'being educated Miccalus', and *A* for 'perishing tomorrow'. Then, *B* is truly said of *C*, for Miccalus is educated Miccalus; but also *A* of *B*, for educated Miccalus might perish tomorrow (meaning that Miccalus might tomorrow cease to be educated). However, to conclude *A* of *C* is wrong, since the major premiss, 'Educated Miccalus is something perishing tomorrow' does not hold of the whole of the substrate, but only of the qualification 'being educated'. Now, unless this is assumed, there is no syllogism — as we have explained before — Aristotle concludes. The error is due to one's failure to take notice of what (at face value) is a small distinction, viz. that between 'this falls to that' and 'this falls to the whole of that' (33, 47b16-40).<sup>67</sup>

Of course, the term used by Aristotle to indicate that the attribute does not apply to the whole of the subject, 'being-educated-Miccalus', is the two-word phrase καθ' ὅλου (*lit.*: 'said of the whole'), not the one-word expression καθόλου ('holding universally'), since, *pace* the common translators, this case has nothing to do with an erroneous universal assignment of an attribute to every instance of 'educated Miccalus' (whatever that means), but is concerned with ignoring the telling difference between the substrate, Miccalus, as simply denoted by the composite expression 'educated Miccalus' and the same substrate *qua* possessing the coincidental attribute 'being educated'. Hence the error boils down to ignoring the ins and outs of categorization.

When in chapter 34 he deals with the confusion between appellations inasmuch as they are used to refer to a thing's coincidental

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<sup>67</sup> Ross (*ad loc.*) wrongly ascribes the error to incorrect quantification. Rather it is the requirement of commensurate attribution that is ignored, as is clear from Aristotle's remark (b27-28; 35) that the καθ' ὅλου condition is violated. The 'always (ἀεί) educated' does not hold of Miccalus commensurately (and the 'always conceivable' not of Aristomenes either). As so often, the reading καθόλου is not correct.

mode of being and when used to stand for the substrate possessing it, Aristotle explicitly speaks of ecthesis. The error consists in the terms of the premiss not being correctly set out (μὴ καλῶς ἐκτίθασθαι; cf. μὴ καλῶς ἐκκεῖσθαι at 48a8). Taking, for example, *A* for 'health' ('being healthy'), *B* for 'disease' ('being diseased'), and *C* for 'man' ('being a man'),<sup>68</sup> it is true to say that *A* cannot belong to any *B* (for health and disease are mutually exclusive), and again that *B* belongs to every *C*; for every man is susceptible to disease. It would seem to follow that health cannot belong to any man. But this is not the case. The reason is that the terms 'being healthy' and 'being diseased', are at one time taken to stand for the properties and at another for the persons affected by them (48a1-23). Evidently, in all such cases the error arises from the setting out (ἔκθεσιν) of the terms. As soon as you substitute the persons affected for the affections themselves, the error disappears (48a24-26).

Sometimes the ecthesis is disturbed owing to our attempt to express an attribute by a single name when no name is available. This would result in failure when it comes to moulding the intended proof into the appropriate syllogistic form (ἀνάγειν τοὺς τοιοῦτους συλλογισμούς). This could happen when we try to prove an immediate proposition, i.e. a thesis that is self-evident and does not need to be proved through intermediary terms. For instance, *A* = 'having the sum-total of two right angles' ('being 2R'), *B* = 'being a triangle', and *C* = 'being an isosceles'. Now *A* falls to *C* through *B*, but *A* belongs to *B* without the mediation of another mode of being; for the triangle has the 2R-property in virtue of itself. The result is that while the thesis '*A* belongs to *C*' is syllogistically provable through the intermediate mode of 'being a triangle', there will seemingly be no intermediate mode of being between *A* and *B* to serve as a middle term for proving *A* of *B*. But this is a mistake due to deception at first sight; for although the intermediate mode of being cannot be expressed by a single word (ὄνομα), it surely can be, by using a descriptive phrase (λόγος). For an apt description of such a middle term Ross (1949, 404f.) refers to *Met.* Θ 9, 1051a24-26, where 'being a triangle' is described as 'being a figure possessing interior angles that have the same sum-total as the angles about a point' (ch. 35, 48a29-39).

In chapter 36, another possible impediment of ecthesis is dealt with. It occurs whenever one fails to see that the logical relationships

<sup>68</sup> For these equivalences see my section I.64.

between the various modes of being which fall to the substrate and the attribute of the thesis to be proved, may be expressed not only by the nominative case but by oblique cases as well, and that the nature of the relations as expressed in the premisses dictates the way in which to render the relation 'substrate-attribute' in the conclusion. In fact, Aristotle is pointing out in this chapter that the technical device ὑπάρχειν ('to fall to') which is normally used to express attributive relationships, is a rather vague term which may be used to stand for different types of relationship. This means that they cannot always be expressed in terms of one thing [*x*] straightforwardly *being* [*y*]. 'To fall to' has as many senses as 'to be' has:

*APr.* I 36, 48a40-b9: That the first term falls to the middle, and the middle to the extreme must not be taken to imply that they can always be said of one another, or that the first will be said of the middle in the same fashion as the middle is said of the last term; the same holds if there is talk of 'not falling to'. Rather, we must think that 'to fall to' has as many meanings as the senses in which 'to be' is used, and 'to say truly that *this* is *that*'. Take, for example, the sentence "Of contraries there is one single discipline". Let *A* be the dictum 'that-there-is-one-single-discipline', and *B* stand for 'things' being contrary to one another'. Then, *A* falls to *B*, not in the sense that contraries are *the fact* of there being one single discipline of them, but in the sense that it is true to say of contraries that there is one single discipline *of* them.

The same holds good in the case of 'not falling to'. For 'that does not fall to this' does not always mean 'this is not that', but at times 'this is not *of* that' or 'this is not *for* that' (48b27-30). We make a universal claim on this account, without any qualification — Aristotle continues (48b39-49a5) — to the effect indeed that the terms should always be posited in their nominatives (κατὰ τὰς κλήσεις τῶν ὀνομάτων),<sup>69</sup> e.g. 'man', 'good', 'contraries', not: '*of* man', '*of* good', '*of* contraries'; but, as far as the premisses are concerned,<sup>70</sup> they must be taken according to the cases of each term — for either one of the two things (viz. the substrate, or the attribute) may occur in the dative, e.g. in 'being equal *to* this', or the genitive, as in 'being the

<sup>69</sup> Cf. *SE* 14, 173b40.

<sup>70</sup> I take the accusative to be used in an anacolouthon as a so-called 'accusativus pendens', as is not uncommon in Greek when an object or issue is announced. It may be rendered 'as for', 'speaking of'. Kühner-Gerth II, 412; Ross, 415 and 423. For the use of similar infinitival accusative constructions in Aristotle see *APr.* I 32, 47b13; 43, 50a11; 45, 50b5. Bonitz (*Index*, p. 46b-47a, s.v. 'Anacoluthia') seems to take such constructions as containing neuter plural nominatives.

double *of this*', or the accusative, as in 'hitting (or seeing) *this*', or in the nominative, as in 'man *is* an animal', or in whatever other way the word may be declined as occurring in the premiss.<sup>71</sup>

In chapter 37 it is concisely stated that the expressions 'this falls to that' and 'this is truly said' (ἀληθεύεσθαι) ought to be taken in as many ways as the categorial appellations (κατηγορίαι) are diversified; and these are to be taken either in a qualified sense or absolutely,<sup>72</sup> and further as expressed either by simple or by compound terms (ἢ ἀπλᾶς ἢ συνπεπλεγμένως). The same thing obtains for 'this does not fall to that'. This demands further inquiry (49a6-10).

Along the same line of argument, Aristotle proceeds (chs. 38-41) to address other problems concerning the correct composition of premisses. In ch. 38 the position of the qua-functor is examined.<sup>73</sup> This functor, here introduced by the word ἐπαναδιπλούμενον<sup>74</sup> = 'what is reduplicated' — this stands for 'the phrase restrictively modifying the preceding term' — should be attached appropriately, to the major term indicating the substrate, that is. In Aristotle's words:

*APr.* I 38, 49a11-19: What is reduplicated in the premisses ought to be attached to the major term, not to the middle. I mean, for example, that if a syllogistic proof is to be framed that there is genuine knowledge of justice in-that-it-is-a-good,<sup>75</sup> then the phrase 'in-that (ὅτι)-it-is-a-good' or 'qua being good' must be attached to the major term. Let *A* be 'knowledge <of an object> in-that-it-is-a-good', *B* 'what is good', and *C* 'justice'. Then it is true to say *A* of *B*<sup>76</sup>: for of what is good there is a genuine instance of knowledge that-it-is-a-good-as-such. But it is also true to say *B* of *C*, for justice is precisely what-is-good. So it is in this manner that the argument is analysed.

Analysing, then, the argument in this manner, the following syllogistic proof can be advanced in support of the initial thesis:

<sup>71</sup> Ross, 408.

<sup>72</sup> Cf. *Top.* II 10, 115b11-35; *SE* 5, 166b35-167a20; 6, 168b11-16; 25, 180a23-b39.

<sup>73</sup> This chapter is extensively discussed in Bäck (1996), 3-27.

<sup>74</sup> For the use of the participle ἐπαναδιπλούμενον (and cognate terms in Greek, particularly after Aristotle), see Bäck (1996), 5. Compare the use of διπλώσας at *APo.* II 4, 91a21.

<sup>75</sup> I take the ὅτι ἀγαθόν-clause to be a construction of indirect speech, implementing the propositional attitude expressed by 'knowledge'; cf. Bäck (1996), 5f; 23. I intend to express the relationship between knowledge and its objective content by using the formula 'the knowledge *holding that* [...]'.  
<sup>76</sup> I.e. taking the term 'good' obliquely: 'of the good'. See Aristotle's explanation at 48b27-30.

Of what is good there is genuine knowledge holding that it is good;  
 justice is something which is good;  
 therefore, of justice there is genuine knowledge holding that it is a  
 good.

However, if the expression ‘in-that-it-is-a-good’ is attached to *B*, Aristotle continues (49a19-22), there will be no syllogism, since *A* will still be true of *B*, but *B* no longer of *C*: for to say ‘being good qua good’ or ‘being good-in-that-it-is-good’ of *justice* is wrong and unintelligible.<sup>77</sup>

From the lexicographical point of view, the use of ὅτι in this context (six times in 49a13-21) should be listed under the broader use of ὅτι as a causal particle, meaning ‘for that’ or ‘because’.<sup>78</sup> This general sense is at times narrowed to ‘in so far as’,<sup>79</sup> as is implied by Aristotle’s explicitly equating the phrase ὅτι ἀγαθόν to ἡ ἀγαθόν (‘qua good’). For this reason I take ὅτι in that sense as often as possible. But Aristotle’s habitual elliptical manner of speaking makes him use the particle ὅτι, when it follows the substantive ἐπιστήμη (‘genuine knowledge’) and the like, by the same token in its general function of introducing an objective clause (‘that-clause’), which it particularly has after verbs of seeing or knowing, thinking or saying.<sup>80</sup> Combining the general use with the aforesaid reduplicative use (to qualify the preceding notion it is added), we had better render ὅτι when used after ἐπιστήμη (as at 49a13,15,17) or as governed by the verb κατηγορεῖν (at 49a21), “that-<[x]>-is-<[y]>-as-such”, because in this way one can do justice to the pregnant use the particle ὅτι has as a result of Aristotle’s elliptical manner of speaking.

What is more, on this interpretation Aristotle’s intention in the above passage will come to the fore more clearly: ‘to know that [x] is good’, rather than just referring to knowing [x]’s being something good, stands for knowing that [x] qua being [x] is good.<sup>81</sup> Therefore Aristotle rightly claims that (when one erroneously adds the reduplication to the middle term, that is) to say of justice that it is a good qua good is either false (viz. meaning that ‘justice’ is formally

<sup>77</sup> Cf. Alexander CAG II-1, p. 368<sup>3-6</sup>, and Philoponus CAG XIII-2, p. 345<sup>4-9</sup>.

<sup>78</sup> Liddell & Scott s.v., lemma B.

<sup>79</sup> Ross, 409f. (“There is knowledge *in so far as* [Ross’s italics] it is good”).

<sup>80</sup> Liddell & Scott s.v., p. 1265b, lin. 16f.

<sup>81</sup> The same holds good for the remaining part of the chapter. See the fine analysis in Bäck (1996), 14-26, who is quite right in linking up (19) the use of the qua-functor with the requirement that the middle must apply as a universal commensurately (καθ’ ὅλου) to the substrate, which to this end must be ‘qualified’ by means of the qua-functor.



the same thing as 'good'), or unintelligible (viz. if it is taken to stand for 'justice belongs to the things that are good qua good').

In his analysis of *APr.* I, 38, a chapter of utmost importance for the logic of reduplication, Allan Bäck (1996, 3-27) renders the phrase ὅτι ἀγαθόν 'that it is (a) good', and regards (5f.) 'in respect of being good' and 'because it is (a) good' as possible alternatives. Eventually he thinks (*ibid.*) his translation is best. Bäck (5) rightly observes in ὅτι ἀγαθόν the usual construction of verbs (or nouns) expressing a mental attitude, owing to which the phrase reports or specifies what is known. But he wrongly assumes (6) that Aristotle's saying at 49a14: "that it is good or qua good" is not decisive for how the ὅτι clause is to be taken, and follows (*ibid.*) Ross's assumption (409f.) that Aristotle is considering two different types of reduplicative propositions in this chapter, the ὅτι and the ἥ types, and that in the remark at 49a14 Aristotle is anticipating what he is going to say later.

By ignoring the elliptical and pregnant use of the ὅτι clause, as well as the purport of Aristotle's remark on the equation of ὅτι and ἥ, Ross and Bäck seem to have blocked the road to a coherent and single interpretation of the text. I can fully understand Bäck's suggestion (6) that "perhaps a neutral translation would be to regard ὅτι to introduce a specificative clause 'in that'", as well as his emphasizing (twice, pp. 5 and 6) that the phrase with ὅτι reports or *specifies* (italics mine) what is known. On this view, it seems better to refrain from contrasting and opposing the aforesaid "possible translations".<sup>82</sup>

Returning now to the passage just quoted, plainly, the reduplication or specification should be attached to the major term 'knowledge', not to the middle term 'justice'. This holds good of every case in which a specification is added to an attribute (ἐν ἅπασιν τοῖς ἐπικατηγορουμένοις), e.g.<sup>83</sup> if it is proved that what is healthy is something truly known *qua its being something good*, or that the goat-stag is something known *qua its not-being*, or that man is something perishable *qua his being perceptible*<sup>84</sup> (49a19-26).<sup>85</sup>

<sup>82</sup> Pace Bäck (*ibid.*, 6, n. 9) *Int.* 14, 23a40-24a1 deals with matters of opinion or belief (rather than genuine knowledge 'that [x] is as such [y]'), in which 'the good' and 'the not good' are *not* taken formally as 'the (not) good qua (not) good', so that in that context the particle ὅτι merely introduces a *that*-clause.

<sup>83</sup> These examples are duly commented upon by Alexander (CAG II-1, p. 368<sup>28</sup>-369<sup>21</sup>) and Philoponus (CAG XIII-2, p. 345<sup>12-21</sup>); Bäck (1996), 9, nn. 21-3.

<sup>84</sup> The perceptible always being material is by definition perishable. Cf. *Cael.* I 9, 278a11: "Everything that is perceptible subsists, as we know, in matter".

<sup>85</sup> The previous passage is also discussed in my section 2.74.

In the subsequent lines (49a27-b2)<sup>86</sup> Aristotle goes on to discuss how to find a suitable middle term for syllogisms containing specified attributes, i.e. attributes when applied in a specific sense which is expressed by additions like ‘with reference to something determined’ or ‘in a certain condition’. For example, the thesis ‘what is good is something truly known’ is an absolute thesis, while ‘what is good is something truly known *qua being good*’ is a specified one. In the former case we have to use as middle term the thing’s mere being-this-or-that, while in the latter its being in a specified capacity should be taken as middle term. Let, for instance, *A* stand for ‘knowledge of [*x*] in-that-it-is-something specific’, *B* for its ‘being-just-what-it-is’, and *C* for ‘good’. It is true, then, to say *A* of *B*; for, as we have seen before (in the previous passage), there is of the specified thing genuine knowledge that-it-is-as-such-something specific. But likewise *B* is true of *C*, for *C* stands for what-is-something specific. Hence, *A* is true of *C*, too. Clearly there will be of the good genuine knowledge that-it-is-as-such-a-good (49a27-36). This conclusion is explained by Aristotle saying (49a36) that a specific mode of being (τὸ τὶ ὄν) represents something of the proper essence — in Aristotle’s words: “is a sign (σημεῖον) of the proper essence (τῆς ἰδίου οὐσίας)”; that is to say in the present case, that that which is good is truly known precisely in its capacity of being a good.

On the other hand, if ‘simply being’ were taken as middle, and simply attached to the major term, and not in the form ‘being something specific’, then there would not be a syllogism proving that there is genuine knowledge of what is good *holding that it is as such a good*, but merely that it is something ([*x*], [*y*] etc.), period, such as in the case in which *A* would stand for ‘true-knowledge-that-[*x*]-is’, *B* for simply ‘being’, and *C* for ‘good’. Evidently, in syllogisms that are about specified attributes, you have to take the terms in the aforesaid manner.

We now have to settle the question what this chapter is all about. What Aristotle is trying to make clear I think is how to frame the premisses in cases of attributes that are applied to some substrate in a specified form. Clearly, such specifications of the terms involve extra requirements for the syllogism to be conclusive. He explains his intention about finding the suitable middle in terms of the notion ‘be’, claiming that the thing under discussion can be brought up *either* in virtue of its complete quiddity, i.e. as just being given (τὸ ὄν),

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<sup>86</sup> See the lucid exposition of this paragraph in Bäck (1996), 14-27.

or owing to a certain focalization on our part, in its capacity of being somehow specified (τὸ τὸ ὄν).<sup>87</sup>

Three things need to be observed. First, *pace* Ross (1949, 409) and Bäck (1996, 4-22), the notion 'be' occurring in the devices τὸ ὄν and τὸ τὸ ὄν does not refer to 'existence', but to 'being', viz. an unspecified mode of being and a specified one, respectively.<sup>88</sup> Second, the specification depends on the focalization of the observer. It plays an important part in correctly framing apodeictic premisses and thus has everything to do with the καθ' ὅλου requirement discussed in *APo.* I, chs 3-5, which is intended to make the investigator see that the attribute under examination commensurately applies to the substrate. Third, there is a telling difference between qualification and specification as used in this context. To complicate matters, neither the ὅτι device nor its equivalent, the ἥ device (in current rendering, 'qua-device') bear on 'qualifications' in the usual sense of 'restrictive modification' (in the current sense of 'secundum quid'), but rather in the general sense of 'specific quality which fits somebody or something for a certain function or purpose'. Putting (in the wake of Bäck) this difference in terms of logic, the restrictive *qua*-functor serves to guarantee an attribute's being truthfully applied, while when used in its specificative sense, it serves not the truth of the assignment, but its provability. Saying, for instance, 'The Ethiopian is white in respect of his teeth' (*SE* 5, 167a11-13), the qualification prevents the assertion from being false, while in 'Man is mortal *qua* being perceptible' the omission of the qualification does not affect its

<sup>87</sup> Smith (1989, 170f.) rightly claims that while having a more generalized account of cases involving 'reduplication' in view, Aristotle is using the expression 'being something' (ὄν τι, τὸ ὄν) "as a sort of variable, perhaps best represented as 'being *F*'." On this interpretation, Aristotle's remark at 49a36 "The expression 'being so-and-so' is, as we said, a symbol for its peculiar being" (ἦν γὰρ τὸ τὸ ὄν τῆς ἰδίου σημείου οὐσίας) makes good sense. Cf. Bäck (1996), 17.

<sup>88</sup> Cf. Smith (1989), 171. Tricot rightly has 'être' and 'tel être déterminé'; cf. Mignucci: 'essere' vs. 'un particolare essere'. — Bäck uses the word 'existent' in a rather vague way, which seems to come close to just 'being'. He writes (1996, 17): "[...] 'something existent' is to be taken generally, and [...] as indicating the sort of thing that should be used as the middle term. In modern terms, 'what is existent' [τὸ ὄν, De R.] and 'something existent' [τὸ τὸ ὄν, De R.] are variables, but with the addition that they specify to a degree what sort of things they should be replaced by"; see *ibid.*, 19: "The major feature of the contrast is that 'something existent' (ὄν τι) indicates something that is more particular [read 'specific', De R.] than 'existent' (ὄν)". — However, the Greek notion of εἶναι ought to be well marked off from that of sheer physical 'existence'. Note my distinction between strong and weak *hyparxis*; see my *Index* s.v.

truth, but only its provability. For this reason we should perhaps prefer the word 'specification' to 'qualification'.<sup>89</sup>

In light of this interpretation, our chapter more neatly fits in with the general discussion found in I, chs. 27-46, about how we are to find the suitable premisses,<sup>90</sup> including particularly the role of ecthesis.<sup>91</sup> That the technical term 'ecthesis' is not used in ch. 38 must not blind us to the fact that it is ecthesis (in the sense of what I have labelled 'focalization') which enables us to single out a specific quality from a thing's general mode of being, for instance, 'being (a) good' from 'being just' as applied both to, say, giving one's friends the support they need. Eventually, it is ecthesis, too, which procures for us what was labelled before 'the most appropriate middle term', to wit the one conveying the attribute as commensurate to what is signified by the term used to bring up the substrate.<sup>92</sup>

The chapters 39-41 deal with some other problems concerning the correct framing of the premisses. In ch. 39 Aristotle briefly discusses the substitution (μεταλαμβάνειν) of synonymous expressions, word (ὄνομα) for word, phrase (λόγος) for phrase, and word for phrase, or vice versa, with a preference for the substitution of a word by a phrase.<sup>93</sup> He claims that the ecthesis is easier if words are substituted for phrases (49b3-9). In chs. 40-41 the other component of the premiss is examined, viz. the way in which the attribute is assigned to the substrate.

Chapter 40 has a brief remark about the way of using the verb εἶναι (which is frequently omitted, for that matter), to the effect that there is a difference between, for example, the dictums (states of affairs) 'that-pleasure-is-something-good' and 'that-pleasure-is-what-is-

<sup>89</sup> See the lucid explanations of this matter in Bäck (1996), 260ff. By the way, Alexander (CAG II 1, p. 369<sup>34</sup>-370<sup>6</sup>) aptly distinguishes two different types of specification, one bearing on a thing's quidditative components themselves (as in 'the isosceles qua triangle'), the other concerning a condition following from the thing's quiddity, as in 'the healthy qua being good' or 'the goat-stag qua non-being'. Notice that Alexander's distinction has nothing to do with that of Ross between the uses of the ὅτι and ἦ devices.

<sup>90</sup> Alexander (CAG II-2, p. 370<sup>18-22</sup>) writes that in cases of a thesis containing the qua-functor one should instead of looking further for a middle term that belongs to the substrate generally and without specification, seek one that is more proximate and applies in such a way that, when it is thus taken, the major extreme together with the attachment will be truly said of it.

<sup>91</sup> Cf. Patzig (1969), 158, speaking of chs. 33-43.

<sup>92</sup> As was already observed before, the entire discussion in ch. 38 should be interpreted as running parallel to the discussion in *APo*.

<sup>93</sup> Cf. *APr*. II, ch. 22, where the rules for the use of convertible and alternative terms are discussed.

good' or 'the good'. In accordance with this distinction, the major term is either 'being good' or 'being *the* good' (49b10-13).

Chapter 41 is about the device 'to fall to' (ὑπάρχειν), and the impact of the diverse kinds of quantification upon establishing a valid syllogism. Aristotle claims that it is not the same thing either in states of affairs or in speech that 'to-all-that-to-which-*B*-falls, *A*-falls' and 'to-all-that-to-all-of-which-*B*-falls, *A*-falls'. For instance, if being beautiful falls to something white it is true to say 'being beautiful falls to being white', but not 'being beautiful falls to all that is white'. In the first figure (*Barbara*), however, only the latter will do as a premiss (49b14-32).

This chapter winds up with an important note on ecthesis in general (49b33-50a4). We must not think, Aristotle warns, that something paradoxical results from the extrapolation procedure; for it by no means implies our taking the extrapolated term to stand for something being on its own; in Aristotle's words "for we are by no means drawing in any idea of its standing for some particular thing" (οὐδὲν γὰρ προσχρώμεθα<sup>94</sup> τῷ τόδε τι εἶναι). In fact, our procedure resembles that of the geometrician who assumes that a line is a foot long, or the like, but never uses his diagrams in the sense that he bases his reasoning upon them. The process of ecthesis (taken, this time, rather to mean the illustrative way of setting out the suitable terms when framing the premisses) may also be compared to the role of sense-perception in epistemonik proof: just as it is not entirely impossible to frame an epistemonik proof (ἀποδειχθῆναι) without illustrative terms, so is it not without syllogistic premisses either.

#### 6. 25 *The proof by ecthesis concerning imperfect syllogisms*

This proof plays only a minor part among Aristotle's proofs for the validity of imperfect syllogistic moods. It is adhibited as a third, alternative way of proving *Darapti* (and mentioned as a possible way of proving two other moods of the third figure, *Datisi* and *Bocardo*, but without the technical terms ἐκθεσις and ἐκτίθεσθαι being used).<sup>95</sup> As for *Darapti*, at I 6, 28a22-26 the text runs: "It is also possible to make the proof by a reduction 'ad impossibile', and by ecthesis (τῷ

<sup>94</sup> For the use of this verb for (erroneously) drawing in an additional notion or idea, when conceptually analysing something, see *Top.* V 3, 130b38-131a19; *Phys.* III 1, 200b19; *Mem.* 1, 450a2.

<sup>95</sup> Patzig (1969), 156.

ἐκθέσθαι) as well. For if both [ $P$  and  $R$ ] fall to every  $S$ , and one of the  $S$  is taken, say the  $N$ , then both  $P$  and  $R$  will fall to it, so that  $P$  will fall to some  $R$ ". In fact, this process boils down to putting a subterm ( $N$ ) of the initial term ( $S$ ) to one side and then working with it.<sup>96</sup> Once again, one specific mode of being is singled out and focussed on — the mode conveyed by the subterm  $N$  — to serve as the 'most appropriate', i.e. commensurate middle term serving as the proof by ecthesis. The logical law governing the ecthesis of *Darapti* is "If  $P$  falls to some  $R$ , then there is a term  $N$  such that  $P$  and  $R$  fall to every  $N$ ". Patzig (162) has pointed out that Aristotle elsewhere (I 28, 43b43-44a2) offers sentences that come very close to formulating this non-syllogistical law: "If we want to establish that something falls, not to every  $[x]$ , but to some  $[x]$  we must consider those <modes of being> which the two modes of being expressed by the substrate and attribute terms <of the initial thesis> fall to; for if any of these coincide, the attribute in question must fall to some of the substrate in question". Thus if you want to show by an ecthesis proof that the third figure syllogism, *Darapti*:

Every man is a substance;  
every man is an animal  
therefore, some animal is a substance

is valid, you must look for a mode of being that is commensurate with the species containing all instances of 'some animal'; now this is the species 'man'. If, then, both 'being a substance' and 'being an animal' fall to 'man' universally, then 'being a substance' must fall to some of the things that are animals, viz. animal's sub-class, 'men'.

#### 6. 26 *Some other instructions for correctly framing syllogisms*

In the small chapter 42 we are told that not every kind of thesis can be proved in each of the three figures; its character may hint at the appropriate figure to be applied (50a5-10). The next chapter argues for confining oneself to dealing with that part of a thing's definiens which is pivotal to our argument. For example, when you want to prove that water is a 'drinkable liquid', you should use the terms 'water' and 'drinkable', leaving aside the irrelevant property, 'being a liquid' (50a11-15).<sup>97</sup>

<sup>96</sup> Patzig (1969), 168. The nature of this ecthesis process is extensively discussed *ibid.*, 159-68; Smith (1989), XXIII-XXV.

<sup>97</sup> Compare the procedure sketched at *APo.* I, 4-5 and II, 8-10; my sections 6.34

Chapter 44 is about the logical composition of arguments 'ex hypothesi'. The fact that they contain a previous disputational agreement as a non-syllogistic component prevents us from completely reducing them to syllogistic form (50a16-28). The same goes for the 'reductio ad impossibile' (50a29-38). Ch. 45 deals with resolving syllogistic moods of one figure into those of another (50b5-40).

6. 27 *On correctly refuting your opponent's thesis*

Book One winds up with a chapter (46) on an important technical item concerning the correct way of refuting our opponent's thesis.<sup>98</sup> We are taught that 'not to be so-and-so' (τὸ μὴ εἶναι τοδί) does not mean the same as 'to be not-so-and-so' (τὸ εἶναι μὴ τοῦτο). E.g. 'not to be white' differs from 'to be not-white'; nor is the latter the proper negation of 'to be white', but 'not to be white' (51b5-25). The same applies to the expressions 'to be not-equal' and 'not to be equal', which do not mean the same thing either. For the former expression applies to some substrate (ὑπόκειται τι) possessing the property of being unequal, while the latter does not imply the idea that there is some such thing. Likewise the expressions 'is a not-white log' and 'is not a white log' are not equally applicable to one and the same thing; for if a thing is a not-white log, it is a log, while that which is not a white log need not be a log (51b25-31).

In the case of a number of things of which some have an attribute while others have not, the negative statement may be true, while the affirmative ones cannot. For instance, we can truly say that it is not the case<sup>99</sup> that all is white or that each is white; but to say that it is the case that each is not-white or that all are not-white is speaking falsely. Similarly, of 'it is the case that every animal is white', not 'it is the case that every animal is not-white' is the negation (for both are actually false), but 'it is not the case that every animal is white' (52a18-24).

In the remainder of the chapter (52a24-b34) a number of more detailed instructions of this type are presented with an eye to correctly adducing syllogisms that prove the opposite of the opponent's thesis.<sup>100</sup>

-6.35, and 6.53-6.55.

<sup>98</sup> Cf. *APr.* II, chs. 15 and 19-20.

<sup>99</sup> It is pertinent to notice that throughout this paragraph the examples used by Aristotle contain the assertoric ἔστιν, e.g. 51b12; 52a1; 52a20-32.

<sup>100</sup> Cf. *APr.* II, chs. 15 ('Reasoning from a pair of opposite premisses'), 19-20

6. 3 *The Posterior Analytics*

In his *Posterior Analytics* (*APo.*) Aristotle intends to define what ἐπιστήμη ('scientific', or rather 'genuine knowledge') consists in.<sup>101</sup> Notwithstanding his rejection of the Platonic Transcendent, Separate Forms as the only foundation of all true knowledge, Aristotle fully agrees with his Master that true knowledge should concern the essential natures of things, and those only. However, as is well known, Aristotle finds the essential natures of everything that is *in* the things themselves as their immanent dynamic forms (εἶδη).

Rather than being a treatise on scientific methodology, or an attempt to axiomatise the sciences, *APo.* represents Aristotle's attempt to devise his own theory of knowledge in opposition to Plato's epistemology of the Transcendent Forms.<sup>102</sup>

The Renaissance commentator Zabarella presents the following division of *APo.*<sup>103</sup> In I, chs. 1-6, Aristotle states the conditions required for establishing an epistemonical proof, which together make up the essence of epistemonical proof (ἀπόδειξις). I, chs. 7-34 deal with the properties epistemonical proof possesses by virtue of having this essential nature; this section includes some loosely connected items like error and ignorance (I, 16-18) and the relationships between genuine knowledge and opinion (I, 33). In II, chs. 1-10 Aristotle tries to assess the role of definition in the apodeictic process and its preparatory stage. In II, chs. 11-18 a number of detailed questions connected with the apodeictic process, which were already touched upon in the preceding chapters are given some more attention. Finally, in II, 19, Aristotle considers how an investigator

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— ('Devices to be used against an opponent'), 26 (ἐνστάσις = 'counter-argument'). Book II is extensively commented upon by Smith (1989), 183-228. The important chapter II 21 is dealt with in my section 2. 61

<sup>101</sup> See for the subject-matter in general, Ross (1949), Barnes (1975), Seidl (1971), Mignucci (1975), Guthrie (1981: 170-202), Ackrill (1981: 94-106), Boh (1990), De Rijk (1990a) and (1990b). The different views of the proper subject and purport of *APo.* are extensively discussed in Detel I, 263-90.

<sup>102</sup> The basic misconception of the purport of *APo.* is mainly due, I am afraid, to the common habit of most of Aristotle's commentators of rendering ἐπιστήμη by the extremely anachronistic word 'sciences' instead of simply 'instances of knowledge'. Guthrie (1981: 171) rightly gathers from ἀπόδειξις defined (at I 2, 71b17-19) as an 'epistemonical syllogism' that "apodeixis is introduced in general terms as a method of acquiring knowledge".

<sup>103</sup> It was adopted by Ross (1948), 42 and (1949), *Introd.* p. 5. I more or less followed this division and the description of its members.— For an assessment of *APo.* in the framework of Aristotle's philosophical investigations see my section 2.52.



comes to acquire the indemonstrable starting-points which are indispensable for any epistemonical proof.<sup>104</sup>

### 6. 31 *The need for pre-existent cognition*

In the opening chapter of *APo.* Aristotle explains that some pre-existent familiarity (γνώσις) with the object is indispensable in order to acquire genuine knowledge (ἐπιστήμη) about it. All teaching and learning, no matter in what art or discipline, proceeds, he claims, by way of reasoning from certain data we are already familiar with (διὰ προγινωσκομένων).<sup>105</sup> As for logical arguments, whether deductive or inductive, they too proceed in this manner: the former make assumptions from what is intellectually grasped; the latter exhibits<sup>106</sup> the universal case through the particular's being clear (71a1-9).<sup>107</sup>

In this opening paragraph we thus already come across an important distinction made by Aristotle between knowledge by acquaintance, the pre-existent kind of knowledge on the one hand, and genuine knowledge sought after by apodeixis on the other. For these two kinds of knowledge, Aristotle is careful to use different expressions. The former is indicated by several terms, such as γινώσκειν, γνωρίζειν, and εἰδέναι, whereas for the latter the words ἐπίστασθαι and ἐπιστήμη are used.<sup>108</sup>

<sup>104</sup> For the relative independence of *APo.* toward *APr.* see my section 6.1.

<sup>105</sup> Cf. *Top.* VI 3, 141a26-31.

<sup>106</sup> Aristotle uses the verb δεικνύναι. The difference between this verb and its composite ἀποδεικνύναι is often ignored (my section 6.54). Barnes (1969, 130; 1975a, 71) rightly undermines the supposed mathematical ancestry of the term ἀπόδειξις.

<sup>107</sup> As will appear later (my sections 6.53-6.58) Aristotle refers here to the investigator's exhibiting a thing's universal concept (a definiens making up an incomplete dictum), or a complete dictum or *that*-clause as actually applying to a particular instance.

<sup>108</sup> For the different Greek verbs conveying any 'being acquainted with' see Barnes (1975; henceforward referred to without the year; his second edition is indicated by '(1994)'), 90. By admitting (e.g. at *APo.* I 1, 71a25-28) 'knowledge' in a qualified sense, Aristotle implicitly opts for the strict sense of ἐπιστήμη as 'genuine knowledge' being the (intended) result of ἀπόδειξις. Barnes (1994, 82) may be right in assuming that the verbs γινώσκειν and εἰδέναι are used by Aristotle rather indiscriminately. All commentators rightly set ἐπίστασθαι apart as the technical term for the special kind of knowledge Aristotle is after in *APo.* However, the rendering 'to understand' (used by Barnes and Burnyeat, among others) seems to be less fortunate. I am afraid, because of its association with only one form of knowledge, viz. 'knowing *that*'. (It is also rejected by Ackrill 1981a, 366, n. 5). They thus ignore the type of knowledge which is so pivotal in Ancient thought (particularly in Plato and Aristotle) — 'knowledge by acquaintance'; see my discussion of

The fact that interpreters have ignored the significance of this vocabulary has given rise to many misunderstandings about Aristotle's intentions throughout the present treatise. There is a widespread misunderstanding about the nature of Aristotelian ἐπιστήμη. It particularly comes about in the rendering 'science' or 'scientific knowledge', which is taken to be the sort of knowledge sought after by disciplinary research, rather than that ἐπιστήμη is 'genuine knowledge'; and this term indiscriminately refers to any piece of genuine knowledge whatsoever, including e.g. knowledge about the true nature of this or that particular (this man, this tree, this stone, qua man, tree, stone, that is). As such ἐπιστήμη can also stand for genuine knowledge about this particular triangle or circle, or this particular biological or astronomical phenomenon. Because of the 'universality' required for any true piece of knowledge, each and every apodeixis by definition includes considering 'man', 'tree', 'triangle' etc. in general.

Thus to what extent it resembles modern disciplines, such as mathematics, biology, astronomy, will come into the picture. However, to associate Aristotelian ἐπιστήμη with 'scientific knowledge' — not to speak of identifying these two — is not only wrong because of the anachronistic connotation of 'science' involved (as is commonly recognized), but also (which seems to be generally ignored) since it links up ἐπιστήμη with the notion of 'discipline' or 'set of disciplinary propositions', and even "an axiomatized deductive system comprising a finite set of connected apodeixeis or demonstrations".<sup>109</sup> Aristotelian ἐπίστασθαι merely stands for 'to (objectively) know for sure', implying, that is, that what is known is something necessary, i.e. a necessary state of affairs concerning the (contingent) object known,<sup>110</sup> and thus may also stand for just one single instance of genuine knowledge.<sup>111</sup>

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'semantic identification'; my sections 6.55-6.57. For knowledge by acquaintance in Plato see De Rijk (1986), 343-7.

<sup>109</sup> Barnes (1969), 123; (1975a), 65; 85-7. However interesting McKirahan's study on Aristotle's theory of 'demonstrative science' may be (1992, *passim*, in particular chs. 11 and 12 on Aristotle's principles and Greek mathematics, and Aristotle's demonstrations and Euclid's *Elements*), it inadvertently tends to obscure Aristotelian issues by exclusively focussing on 'scientific' statements and proofs. An additional drawback of McKirahan's book is that the author re-organizes the composition of Aristotle's treatise and so runs a risk of taking things out of context.

<sup>110</sup> Bonitz, *Index*, 279a14-54.

<sup>111</sup> Thus qua kind of sure cognizance ἐπιστήμη should be well distinguished from αἴσθησις and δόξα. (Bonitz, *Index*, 278b57-279b10). However, the term

Let us return now to the opening chapter of the treatise:

*APo.* I 1, 71a1-9: All teaching and all discursive learning come about from pre-existing awareness (γνώσεως). This is evident if we consider it in every case: for the mathematical disciplines are acquired in this fashion, and so is each of the other arts. And likewise too with the arguments used in every case, both those making use of deduction and those proceeding from induction; for both produce their teaching through what we are already aware of, the former assuming things as coming from which we are presumed to grasp, the latter exhibiting (δεικνύντες) the universal through the particular's being a clear instance of it.<sup>112</sup>

The necessity of pre-existent awareness presents itself in two ways. With regard to some things it is necessary to assume beforehand that they are the case or obtain (ὅτι ἔστι, e.g. the rule<sup>113</sup> that every dictum is either affirmed or denied truly); of some others you must grasp what the expression used signifies (e.g. that 'being a triangle' has this special meaning; ὅτι τοδὶ σημαίνει); and of still others both — e.g. of the unit (μονάς) both what the expression signifies and that 'being one' is the case, i.e. that there is here and now an instance of 'being one'. For each of these is not clear to us in the same manner as the other (71a11-17).<sup>114</sup> The last sentence refers to the different types of pre-existent awareness, viz. either that a phenomenon is the case, or what its name (i.e. the appellation by which the phenomenon perceived by sense-perception is actually designated) signifies, or both.

At face value, Aristotle's manner of expression is rather vague. From his examples it might appear that the ὅτι ἔστι device may bear indiscriminately on what we call 'logical existence' as well as actual occurrence. This would seem perfectly in keeping with his use of εἶναι, since Aristotle, like other philosophers, uses this verb throughout just to stand for the counterpart of what is 'not-being' ('actually not being the case',<sup>115</sup> or 'being impossible').<sup>116</sup> However, from

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ἐπιστήμη is also used in a broader sense for all sorts of cognizance; Bonitz, *Index*, 279a1-4; b41-57.

<sup>112</sup> The purport of this sentence (71a8-9) will be made clear by Aristotle in Book II, particularly in chs. 8-10. Note that Aristotle here uses the verb δεικνύναι, not ἀποδεικνύναι ('prove' in the proper sense). What Aristotle means to say is that the universal is exhibited (δεικνύσθαι) as enmattered in a particular, which owes its being clear to the universal coming to the fore in it. My sections 6.53-6.55.

<sup>113</sup> On this Law of Excluded Middle (LEM) my section 7.5.

<sup>114</sup> For the discussion of this passage see my section 6.35.

<sup>115</sup> I use the latter part of this expression loosely for any being in existence ('exist', 'obtain', and the like). Barbarisms and other *less idiomatic* expressions cannot always be avoided; see also the pertinent remarks in Barnes, 91. It still

Aristotle's later discussions it will appear that in the context of epistemonik proof he is rather thinking of 'things' which not only obtain universally but also actually apply to particular instances.<sup>117</sup>

In the subsequent lines the author gives us a useful hint about what he understands by 'becoming familiar with' (γνωρίζειν) as opposed to 'acquiring genuine knowledge' (ἐπίστασθαι):

*APo.* I 1, 71a17-29: Such a becoming familiar may happen in some cases owing to a previous act of getting familiar<sup>118</sup> with something; in some, on the other hand, at once, to wit, as to whatever happens to fall under the universal case you are already familiar with. For that every triangle has angles equal to two right angles<sup>119</sup> one already knew beforehand (προῆδει), but that this thing<sup>120</sup> in the semicircle here is a triangle one recognizes (ἐγνώρισεν)<sup>121</sup> as soon as one was confronted with this particular. For in certain cases, learning occurs thus, that is to say,<sup>122</sup> not in that the ultimate particular (τὸ ἔσχατον) becomes familiar through a middle — in all cases, indeed, dealing with what are in fact particulars and not some thing said of some underlying substrate. One might perhaps say that there is genuine knowledge (ἐπίστασθαι) in one respect before the recognition, or before reasoning, but in another respect there is not.<sup>123</sup> For the person who did not see<sup>124</sup> (ᾗδει) whether it is *simpliciter* that<sup>125</sup> [viz. a triangle], how could he see that it is 2R, *simpliciter*? Clearly he has *knowledge* <of the particular case> thus, i.e. inasmuch as he knows it universally [i.e. as an instance satisfying the universal]. However, to know it in the unqualified sense is out of the question.

Let us take a closer look at the text to pick up all these clues.

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remains a matter of appreciation *when* such 'barbarisms' can be countenanced as seeming essential to the understanding of Aristotle's argument. No doubt, this question will be the more delicate whenever non-native-speaking translators take it upon themselves to answer it.

<sup>116</sup> In *Met.* Δ 29 the 'non-being' involved in Socrates's actually not being seated or being not-seated is contrasted with the diagonal's not being commensurate with the sides of the square.

<sup>117</sup> For particulars as the usual subject matter of discussion see Jacobs (1980), 183-8; cf. my section 2.71.

<sup>118</sup> Ross's emendation (505) γνώρισαντα for the MSS reading γνωρίζοντα is questioned by Detel II, 30.

<sup>119</sup> Henceforward, 'being 2R'.

<sup>120</sup> Heath (1949, 38) suggests we should assume that the figure is not properly drawn as a triangle. In my view the figure is an object with a triangular shape, e.g. a tympanum.

<sup>121</sup> Perhaps we should take the aorist as a gnomic aorist ('one recognizes').

<sup>122</sup> Taking the καί epexegetically.

<sup>123</sup> This problem is discussed extensively in *APr.* II, 21; my section 2.61.

<sup>124</sup> My rendering plays on the root 'id-' being common to εἰδέναι and ἰδεῖν.

<sup>125</sup> Cancelling the comma before τοῦτο and putting it after it.

(1) Taking the triangle example, the person examining a semicircle (say, on the front of a temple), who is supposed to be familiar with Euclid's theorem (I, 32) about every triangle's being 2R, comes to see that the straight-lined figure inscribed in the semicircle is a triangle, at the same time as he comes to observe it. This happens 'immediately', unlike his knowing that therefore this figure is 2R, since the latter feature becomes only familiar to us deductively through the middle 'being a triangle'. This is the way, Aristotle says, in which at times the process of learning takes place — in all those cases, indeed, in which our awareness of some particular thing (like the inscribed figure) does not depend on our deducing this through an intermediary mode of being (like 'being 2R'). The word ἔσχατον is used (at 71a23) to stand for 'ultimate substrate', whose precise characteristic is 'not to be said of something else'.<sup>126</sup>

(2) This leads Aristotle to the intriguing question whether or not we can speak of genuine knowledge in this case. He agrees that in a certain respect we can, namely with reference to the precognition of Euclid's theorem,<sup>127</sup> which precedes any subsumption of whatever particular figure, or any deductive reasoning. But surely there is no question of genuine knowledge in another more telling respect: for, prior to the subsumption, our person did not see directly whether the figure was a triangle, let alone was he aware of the intermediate property of 'being 2R' *simpliciter*, which did not enter into the picture at all.

(3) None the less, with regard to the particular case of the triangle inscribed in this semicircle here, there is an instance of really knowing, since by subsuming the particular figure under the universal 'being a triangle', the person comes to truly know the figure's quiddity.

(4) On the other hand, there can be no talk of knowledge in the unqualified sense, since precisely that which is constitutive of genuine knowledge, viz. proof by means of a middle (viz. the figure's property of 'being 2R') is missing here.<sup>128</sup>

<sup>126</sup> Cf. *Met.* Δ 8, 1017b23-24: τὸ θ' ὑποκείμενον ἔσχατον, ὃ μηκέτι κατ' ἄλλου λέγεται. Cf. Α 3, 1069b36; *Meteor.* IV 12, 390a5. At *EN* VI 9, 1142a28 Aristotle speaks of "the sort of immediate perception whereby we perceive that the ultimate figure (τὸ ἔσχατον) in mathematics is the triangle".

<sup>127</sup> In fact, in the converse form 'Everything being 2R is a triangle'.

<sup>128</sup> The syllogism that arises from subsumption and induction is described at *APr.* II 23, 68b15-29. Cf. *APo.* I 18, 81b2-5.

(5) Generally speaking, the cognitive process called ἐπαγωγή (verb, ἐπάγειν) is the passage from particular to universal.<sup>129</sup> The term ‘induction’ is used in various ways, which all reduce to one focal meaning, viz. attending to particular cases to grasp a ‘universal point’.<sup>130</sup> The chief role of induction is to prepare for the deductive procedure by bringing about the universal point that can serve as a syllogistic ‘middle’.

(6) Commentators and translators are in a constant habit of taking the neuter substantivated adjective, τὸ μέσον, as a synonym of the masculine substantive, ὁ μέσος ὄρος, and, accordingly, in the sense of ‘the middle term’. This rendering suggests that it should be linked up with an expression standing for just a ‘thing’ (such as ‘man’, ‘stone’, ‘rational’, ‘ambulation’, and the like). Instead, τὸ μέσον should be taken to refer to (the incomplete dictum expressing) a state of affairs, viz. some mediating attribute falling to the substrate in question, say, ‘[x]’s being a man, rational, walking’ etc.<sup>131</sup> The rendering ‘middle term’ is also less appropriate, it would seem, because of its association with the fully-fledged syllogism dealt with in *APr*.

In the remainder of the chapter (71a29-b8) Aristotle goes on to deal with the dilemma of Plato’s *Meno* (80D-86C), running: Can someone acquire knowledge of what he does not know already, since acquiring seems to include your knowing what you are seeking after? While Plato tries to counter this problem by his doctrine that all learning is reminiscence, Aristotle solves it by pointing out that the major premiss only contains the intended conclusion potentially.<sup>132</sup>

### 6. 32 *Genuine knowledge and epistemonik proof*

Chapter 2 begins (71b9-12) by stating the nature of truly knowing by gathering it from the ways in which it is commonly spoken of.<sup>133</sup> We

<sup>129</sup> *Top.* I 12, 105a13-14; I 18, 108b9-11; *APo.* I 8, 81b1; II 7, 92a37-38.

<sup>130</sup> Engberg-Pedersen (1979), 304ff; 318. Ross (481-5) presents an extensive discussion of the terms, but his interpretation has been questioned in recent years, mainly because of his viewing Aristotelian ‘induction’ in terms of an inferential procedure. My sections 2.53-2.57.

<sup>131</sup> This should be seen in the broader context of the notion of connotative being included in any noun and verb; my section 1.64.

<sup>132</sup> Ross, 506f.; Barnes, 94-6; (1994), 87-9 (who rightly puts the problem in a broader context); Detel II, 15; 36. However, all these commentators deal with this item in terms of ‘propositional knowledge’ (‘knowing *that*’).

<sup>133</sup> *Pace* Barnes (97), Aristotle joins the common philosophic view of ἐπιστήμη, which was particularly prominent in Plato. In fact, Aristotle tries to make clear that,

think we know a particular in an unqualified sense (and not in the sophistic fashion, through focussing on one of its incidental modes of being) whenever we think we are familiar with the cause on which the state of affairs under examination (τὸ πρᾶγμα)<sup>134</sup> depends, and are also aware that it is the cause of it, and, on top of that, that it is not possible for this state of affairs to be otherwise.<sup>135</sup> Now this happens by means of an apodeixis. So the definition of apodeixis is presented, and commented upon, but not until the author has briefly (71b16-17) raised the question whether there is also another type of genuine knowledge, no doubt alluding to the apprehension of the starting-points which was already indicated in the opening chapter (71a1-29), and frequently touched upon in the subsequent discussions,<sup>136</sup> and finally dealt with in due detail in *APo.* II, 19:

*APo.* I 2, 71b9-17: We think we genuinely know (ἐπίστασθαι) a thing *simpliciter* (and not in the sophistic fashion coincidentally)<sup>137</sup> whenever we think we recognize (γινώσκειν) both the cause by which

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to all intents and purposes, his own stipulative definition of ἐπιστήμη is in keeping with the traditional philosophic view. The plural 'we' may surely refer to the members of the Platonic circle. It should be recalled once again that modern observations on the theme 'knowledge in Aristotle', and particularly the role of 'knowledge' in *APo.* (including the interesting commentaries in Barnes, 1994, 83-95) all tacitly take knowledge to be 'propositional', ignoring 'knowledge by acquaintance'; my section 11.4 in Vol. II.

<sup>134</sup> Cf. I 2, 72a25; I 4, 73b28; I 22, 84a12; II 8, 93a22; II 13, 96a35; and 97b13; II 16, 98b30; II 19, 100b17.

<sup>135</sup> Cf. I 24, 85b23-86a13; II 8, 93a4-9; II 11, 94a20; *Met.* α 2, 994b29-30; *Phys.* I 1, 184a12-14. — Contrary to a widespread misunderstanding among Medievalists (e.g. Gordon Leff, *William of Ockham. The Metamorphosis of Scholastic Discourse*. Manhattan 1975, 277f.), Aristotle does not assign necessity and eternity to generable and corruptible things, but merely to a state of affairs as expressed by dictums of necessary statements, the necessity of which, accordingly, is logical, not ontological. This logical necessity is about πράγματα, i.e. things viewed, apart from their actual existence, in the context of the necessary coherence of some of their states, e.g. that between their being a man and being an animal. This coherence is indeed (logically) necessary and eternal ('ever-lasting'), irrespective of this or that man's actual existence. The fundamental divergence on this score between, say, Ockham and Aristotle is due to the famous Franciscan thesis of the 'radical contingency' of any creatural being: apart from God, everything is contingent, even if it depends on 'necessary' causes, since these too could have been non-existent. De Rijk (1990b), 108f; 120-3; (1995), 116f. — Upton's (1991) misconception about 'eternal things' is mainly due to his assumption of a 'scientific If-it-is question' in Aristotle. Goldin's (1996) assumption of 'epistemic substances' in Aristotle follows a similar line of thought.

<sup>136</sup> E.g. I 2, 72a25-b3; 3, 72b18-24; 9, 76a16-22; 23, 84b28-85a1; 33, 88b35-89a4, and II, 8-10.

<sup>137</sup> I.e. when focussing on the thing's (accidental or even essential) mode of being which is coincidental to the mode that should be taken into consideration, given the thesis to be proved. For the notion 'coincidental' see my *Index* s.v. συμβεβηκός.

the state of affairs is the case and grasping that this is its cause, and also that it is not possible for the latter to be otherwise. It is clear, then, that to genuinely know is something of this sort, for both those who do not *know* and those who do — the former thinking they are in such a condition, while those who do know actually are. Hence that of which there is genuine knowledge *simpliciter* cannot be otherwise.

Now we are in a position to understand Aristotle's definition of apodeixis:

*Ibid.* I 2, 71b17-25: By 'epistemonik proof' (ἀπόδειξιν) I mean a deduction productive of genuine knowledge;<sup>138</sup> by 'productive of genuine knowledge' (ἐπιστημονικόν) I understand a deduction by which we obtain knowledge by the mere fact that we grasp it. If, then, to know truly is such as we have posited,<sup>139</sup> apodeictic knowledge must depend <ultimately> on states of affairs which are (1) true, and (2) primitive, and (3) immediate, and (4) more familiar than and (5) prior to, and (6) explanatory of the conclusion (for in this way the 'starting-points'<sup>140</sup> will also be appropriate to what is being proved). <All these conditions should be met>; for though even without these conditions being met, a deductive proof will be possible, there will not be *epistemonik* proof (ἀπόδειξις); for it (i.e. the deduction) will not produce genuine knowledge (ἐπιστήμην).<sup>141</sup>

Subsequently these requirements are explained.<sup>142</sup> The premisses must be (1) true because genuine knowledge is not possible concerning what-is-not,<sup>143</sup> e.g. 'that-the-diagonal-is-commensurate'.<sup>144</sup> And they must depend on (2) what is primitive and (3) non-susceptible of

<sup>138</sup> The Medievals usually speak of 'syllogismus faciens scire'.

<sup>139</sup> In *Int.* (1, 16a1; 10, 19b14; 13, 22a14-15) too the verb τίθεναι is used to indicate the author's coinage of technical terms.

<sup>140</sup> *APo.* I 2, 72a6-7: "I call the same thing 'primitive' and 'starting-point'".

<sup>141</sup> I usually render ἐπιστήμη 'genuine knowledge', and following Guthrie (1981, 171) I prefer 'epistemonik' to the usual rendering 'scientific'.

<sup>142</sup> Barnes, 98-100; (1994), 93-6; McKirahan (1992, 24-35; 41f.; 178-80; 201-26; 260ff.; Detel II, 47-53; 64f.

<sup>143</sup> This phrase does not just mean what is actually not the case (such as Socrates's not being seated).

<sup>144</sup> As is often the case, Aristotle's manner of expression is elliptical, suggesting here that the mathematical example instances a primitive premiss, which seems implausible, since it instances an exceptionable thesis (cf. Barnes, 99). What Aristotle is claiming, I take it, is something rather like this: the primitives ought to be true, first and foremost; otherwise they cannot be used to acquire genuine knowledge, which by its very nature bears on what truly is the case. To avoid any misunderstanding Aristotle gives an example of something which is never the case. (Compare the use of empty concepts like 'goat-stag' in similar cases). Barnes deems the above objections of minor importance. He is also compelled to take ἐπίστασθαι (at 71b26) in a non-technical sense, which in the present context (notice b27, 28, and 30 in particular) would be a bit curious.



apodeixis<sup>145</sup> (or 'immediate'), because one will not genuinely know them without there being the possibility of an epistemoni proof; for to really know that of which an apodeixis in the unqualified sense is possible, *that* is to have the possibility of an apodeixis. They must be both (6) explanatory and (4) more familiar and (5) prior; explanatory, because we only know when we see the cause, and prior, since they are explanatory; and we have previous cognizance of them, not only in the other, aforesaid (71a12-13) sense of grasping what is meant, but also in the sense that they are the case. Once again, the pre-existent cognition divides into (1) being familiar with a quidditative notion and (2) being aware that the quiddity is actually instanced.<sup>146</sup>

Things are prior and familiar in a twofold way: *either* by nature (φύσει) and *simpliciter*, or in relation to us (πρὸς ἡμᾶς), i.e. nearer to sense-perception.<sup>147</sup> What is prior or more familiar by nature or *simpliciter* is what is further from sense-perception, and what is most universal (τὰ καθόλου μάλιστα) is furthest away, while the particulars are nearest; and these are opposite to each other (71b33-72a5).

'Immediate' or 'non-demonstrable' premisses serve as 'starting-points' or 'primitive or ultimate premisses' of an epistemoni proof; and an immediate proposition is one to which there is no other prior:

*Ibid.*, I 2, 72a5-8: To argue from primitives (ἐκ πρώτων) is to argue from appropriate starting-points (ἐξ ἀρχῶν); for by 'primitive' and 'starting-point' I understand the same thing. A starting-point of an epistemoni proof is an immediate premiss (πρότασις ἄμεσος) and an immediate premiss is one to which no other is prior.

It is worth observing that usually the notion of 'starting-point' is relational, referring to starting-points proper to a certain discipline, or, at least, a certain type of argument.<sup>148</sup>

<sup>145</sup> The word ἀναπόδεικτος literally means 'undemonstrated', or perhaps rather 'not involved in any epistemoni proof', which most of the time boils down to 'being immediate' and, accordingly, 'taken to hold, without proof'.

<sup>146</sup> As will be argued for in my discussion of II, I, the meaning of ὅτι ἐστὶ is not (as it is commonly taken to mean) 'that there are such things as [x]', as though empty concepts should be ruled out, but 'that the notion involved actually applies to the particular instance under investigation'.

<sup>147</sup> This distinction is also found in *Top.* VI, 4; *APr.* II 23, 68b35-37; *Phys.* I, 1; *Met. Z* 3, 1029b3-12; *EN* I 4, 1095b2-4.

<sup>148</sup> *Phys.* I 2, 185a4-5.

6. 33 *On the notions* θέσις, ἀξίωμα, ὑπόθεσις, *and* ὁρισμός

In accordance with *Int.* 11, 20b23-24, and 10, 19b5-7, the premiss qua proposition is defined as ‘one part of the contradiction,’<sup>149</sup> one thing said of one’, and differentiated into dialectical and apodeictic. The concept of ‘part of a contradiction’ is differentiated into the one saying something of something, the affirmation, and the one denying something of something, the negation. The notions θέσις, ἀξίωμα, ὑπόθεσις, and ὁρισμός are defined as follows:

*APo.* I 2, 72a14-24: Of immediate, deductive starting-points I call a thesis that which is not to be exhibited (δειξαι) and the possession of which is not necessary for anyone who is to learn anything to already have it at his disposal. But the one the possession of which is necessary for anyone who is going to learn anything whatsoever, I call an axiom (for there are some such items); for we are accustomed to use this name especially of such things. A thesis which assumes either of the parts of a contradictory pair — i.e., I mean, that-something-is-the-case or that-something-is-not-the-case<sup>150</sup> — I call a supposition (ὑπόθεσις); one without this, a definition (ὁρισμός). For a definition is a thesis (for the arithmetician lays down with regard to a unit its being something quantitatively indivisible) but it is not a supposition; for what a unit is and that there is a unit<sup>151</sup> are not the same.

A similar classification of starting-points is found in I 10. Aristotle’s use of the terminology he introduces in the present paragraph is not consistent, in that he applies the terms ‘thesis’, ‘supposition’, and ‘axiom’ in a variety of ways.<sup>152</sup>

The distinction between axioms and theses is said by Barnes to run parallel to that drawn at I 10, 76a37-b2, between common and proper starting-points, but this is too rash a statement. What can be stated with some evidence is that Aristotle uses the terms — ‘the common elements’ (τὰ κοινά) and ‘the common axioms’ (τὰ κοινὰ ἀξιώματα) — indiscriminately,<sup>153</sup> and that he makes no distinction between ‘axioms’ and ‘common axioms’.

<sup>149</sup> Reading (at 72a8-9) ἀντιφάσεως instead of the MSS reading ἀποφάνσεως (Barnes, 102; (1994), 98); at 72a19 Ross correctly follows the Ambrosianus 490 in reading ἀντιφάσεως instead of ἀποφάνσεως, which is found in the other MSS. Detel (II, 67) argues for retaining the MSS reading.

<sup>150</sup> McKirahan wrongly takes (1992, 42f.) this εἶναι in terms of existence claims.

<sup>151</sup> I.e. that there is actually an instance satisfying the definiens ‘being a unit’.

<sup>152</sup> Bonitz, *Index*, 797a1-34 and 802b5-26; Ross, 510f; Barnes, 103; Detel II, 68ff.

<sup>153</sup> Bonitz, *Index*, 402a2-5. Their ‘commonness’ does not bear on their being familiar to everyone (as they indeed are; cf. *SE* 11, 172a27-30; *Met.* B 1, 995b8; 2, 996b27-29; *Γ* 3, 1005a24), but on the fact that they are shared by more than one discipline; Barnes, 103.

Let us now have a closer look at the passage quoted. At 72a14ff. the immediate starting-point serving deduction divides into (a) a thesis and (b) an axiom, while of the former there is the sub-division into (a<sup>1</sup>) a supposition and (a<sup>2</sup>) a definition. Evidently axioms are (the objective contents of) *that*-clauses or complete dictums, such as 'Equals taken from equals leave equals', which is worded as a *that*-clause (I 10, 76a41; 11, 77a30-31), or as an incomplete infinitival clause (as at I 10, 76b20-21). Likewise, the common axiom 'that everything is either affirmed or denied' (LEM) is a *that*-clause. A thesis, on the other hand, is just a sort of position or conception, sharing its being immediately with the axiom, while differing from it by the fact that anyone who is going to learn anything need not already be familiar with it prior to the process of learning.

Theses are twofold. If a thesis assumes one part of a contradictory pair (no matter which), that is to say, it asserts that something is the case, or something is not the case, then there is a supposition; whereas if such a choice for 'yes' or 'no' is missing, we speak of a (nominal)<sup>154</sup> definition.

Aristotle's use of 'thesis' elsewhere is of little help for catching its precise meaning. At *Top.* I 11, 104b19-21, and *Phys.* I 2, 185a5-6 (cf. *Cael.* III 7, 306a12-13 and *EN* I 3, 1096a1-2), 'thesis' is defined as a conception contrary to common opinion but put forward by some famous philosopher; both at *Phys.* 185a5-6 and at *EN* I 3, 1096a1-2, there is talk of maintaining a position against all evidence. In such contexts the adjective 'immediate' (ἄμεσος) conspicuously applies: the thesis is maintained without argument, and no middle is available.

All things considered, the thesis is introduced in our passage (72a14-15) as a sub-division of an immediate *deductive* starting-point, which suggests that, like 'axiom', the term 'thesis' is not used consistently either. None the less, the connotation of being beyond the domain of serious consideration (by proof or by any other way of exhibiting) seems to be common to the generic use of 'thesis'.

In the context of epistemonik proof or pre-existent cognition, thesis is differentiated (72a18ff.) into supposition and definition. The latter is contrasted with the former with all due clarity. A supposition is, as we already saw, some immediate thesis which is an applied dictum or proposition (in the modern sense), in that it states that

<sup>154</sup> See my section 6.53.

this or that is, or is not, the case. A possible notation, therefore, of the thesis-supposition is 'Is: that-[x]-is-[y]' or 'Is: [x]'s-being-[y]', on the proviso, still, that these dictums cannot be proved, and cannot even be exhibited as actually being the case (δεῖξαι; 72a15). This must mean that, qua theses, they are not part of the argumentative process, not even of its preparatory stage.

'Thesis-definition' is contrasted with 'supposition' as its counterpart. We are told indeed that a definition is a kind of thesis that does not assume that something is, or is not, the case. In other words, whoever puts forward a thesis-definition refrains from assuming that the definiens actually applies or does not apply. For instance, the arithmetician lays down of a unit its being something quantitatively indivisible, but does not assert that what is conveyed by this definiens is actually instanced here and now (72a21-24).<sup>155</sup>

At first sight, an intricate problem may arise, since in Book II of *APo.* (e.g. II 7, 92b4-11; chs. 8-10) Aristotle appears to regard definition in a different fashion, by really making definitientia bear on actual states of affairs. However, as will be clear in our discussion of these passages and other sections of Book II, we must realise that Aristotle sharply distinguishes between the definiens taken as such, i.e. framed by, say, the experts — and discussed in II, 8-10 in its capacity of 'nominal definition' — and the definiens as actually applied (in fact, 'exhibited': δεικνύμενον) by the investigator in the course of the epistemonik procedure and, therefore, not taken as thesis-definition as in our passage. Using a modern distinction,<sup>156</sup> the thesis-definition concerns the definiens as a type, while the definiens as dealt with in Book II, though still opposed to what is epistemonically proved, occurs as a token exhibited to be instanced in this or that particular.

Finally, as far as the function of the starting-points with regard to epistemonik proof is concerned, there is some misunderstanding. Barnes, for example, seems of the opinion (104) that they should function as premisses expressible in a syllogistic form, which, how-

<sup>155</sup> Cf. I 10, 76b34ff., discussed below.

<sup>156</sup> Compare Barnes, who on account of the theses-definitions initially (first edition, 104) seemed to express a similar idea, saying "they do not 'suppose', or directly assert, that anything is the case". However, in (1994), 100f., he regards the (*his*, in fact) argument "definitions are posits, posits are principles, and principles are propositions" as a powerful objection to the interpretation 'definition = definiens', and a reason to firmly stick to the statemental exegesis of ὁρισμός. Thus he has no way of recognizing that for Aristotle, an act of defining consists in, among other things, the determination or identification of some particular thing as actually satisfying a certain quiddity signified by a definiens.

ever, is a requirement, the argument runs, that neither axioms nor definitions live up to. But the starting-points as such are nothing to do with the proper syllogistic or deductive procedure, as they are merely the steady stepping-stones which enable the investigator to start off the epistemonical proof. In addition, it is a mistake to view the starting-points exclusively in terms of statemental elements; they equally include conceptual elements, such as definientia.

In the next few lines (72a25-b4) the idea of things depending on primitives is clarified. First, the proper nature of apodeixis is stated once again: One should be aware with inner conviction (πιστεύειν τε καὶ εἰδέναι)<sup>157</sup> of the state of affairs (τὸ πρᾶγμα) thanks to having a deduction of the sort we call apodeixis; and this happens owing to the fact that the components of the deduction are so-and-so *in concreto* (τῷ ταδὶ εἶναι).<sup>158</sup> This being so, we must have a stronger conviction regarding the primitives themselves than regarding the things in question: for that which causes a property to apply to a substrate always possesses that property in a still greater degree than it falls to these other things; for instance, that which causes us to love something is itself still dearer to us. Hence anyone who is going to have the sort of genuine knowledge that is effected by apodeixis, must not only be more familiar with the starting-points ('primitives') and more convinced of them than of the conclusion to be proved. Moreover, none of the opposite propositions from which the opposite and the false conclusion would follow, must be more trustworthy or more familiar to him, since one who truly knows must be entirely incapable of being convinced of the contrary.

In chapter 3 Aristotle proceeds to reject two erroneous views, viz. (1) that no genuine knowledge is possible because of the (supposed) need of 'proving' the first principles (called here τὰ πρῶτα) as well, and (2) that circular proof can result in an infinite regress.

As for the former error,<sup>159</sup> the adherents to this view think we would be involved in an infinite regress, if the first principles too are knowable, and should, therefore, be provable. Aristotle (72b18-25) rejects their view by repudiating the underlying assumption that all knowledge should be susceptible of apodeictic syllogistic proof

<sup>157</sup> Likewise the substantive πίστις is used to indicate 'sure belief', e.g. at *An.* I 1, 482a11.

<sup>158</sup> Cf. I 4, 73a29-31, where the assignment of 'being an animal' to *this particular* man is spoken of.

<sup>159</sup> The unsoundness of the other is discussed at 72b25-73a20.

(ἀποδεικτική). It is evident, he argues, that the knowledge of the 'immediates' (τῶν ἀμέσων) is achieved not by proof (being ἀναπόδεικτον); for if it is necessary to know (in the strict sense, that is) the things which are prior and on which the epistemonik proof depends, and it comes to a stop at some time, it is necessary for these immediates to be unprovable. Indeed we hold, Aristotle says, not only that epistemonik knowledge is possible, but that there is also a certain starting-point for genuine knowledge, owing to which we become familiar with the appropriate<sup>160</sup> definientia of things (τοὺς ὅρους).

Barnes (109; 1994, 107) rightly points out that, as elsewhere,<sup>161</sup> Aristotle's speaking of definitions<sup>162</sup> is representative of his discussion of starting-points in general. Incidentally, in our discussion of Book II 19, which concerns our apprehension of the starting-points (ἀρχαί), it will be shown that these should not be contradistinguished as 'theorems' against 'single terms', as is done by most commentators, and often deemed by them a major problem.<sup>163</sup> Rather the ἀρχαί and ἄμεσα should be taken as (complete or incomplete) dictums.

#### 6. 34 *How to frame necessary premisses. The three requirements*

In chapter 4 Aristotle proceeds to lay down certain requirements the premisses should meet if they are to lead to a conclusion which is necessary in the absolute sense (73a21-25).<sup>164</sup> The proof's effectiveness depends upon our focussing on the relevant relationships existing between the components of the proof. From the formal point of view, these components are substrate, attribute, and definiens. The substrate is in fact the intended object of knowledge; the attribute is the specific property under discussion; whereas the definiens is the

<sup>160</sup> For this use of the definite article in Greek see Kühner-Gerth I, 593, and Verdenius (1981), 351.

<sup>161</sup> *Top.* VIII 3, 158a33 and b4; *APo.* II 3, 90b27; *An.* I 1, 402b16-26; *Met* B 3, 998b5; Z 9, 1034a30-32; M 4, 1078b23; *EN* VI 8, 1142a26; 11, 1143b2

<sup>162</sup> I prefer to speak of 'definientia' As a matter of fact, Barnes continually takes the definitions to be propositions, and, accordingly, potential candidates for syllogistic premisses.

<sup>163</sup> Consequently, the commentators are faced with a major problem on this score. Barnes (249), for example, speaks of "a deep-seated ambiguity" found by most commentators in II, 19; and, though his own view about the matter is clearly less drastic, he still sees (259f.) Aristotle vacillating between "a propositional and a conceptual account of the principles". This important issue will be discussed in my sections 6.82-6.84.

<sup>164</sup> A pertinent discussion of chs. 4-6 from the viewpoint of Aristotle's logic of modalities is found in Van Rijen (1989), 132-84.

intermediary element of the proof, which was later called the ‘medium demonstrationis’. To frame a correct and successful apodeixis, then, comes down to pointing out the essential relationships between the object and the attribute by, as Aristotle calls<sup>165</sup> it, ‘hunting for’ the proper ‘middle’ (μέσον).<sup>166</sup>

The relationships between the constituents of proper epistemonik proof are correctly observed, if the investigator meets a number of requirements to be fulfilled by the kernel premiss of the epistemonik syllogism — the one, that is, which contains the medium demonstrationis. These requirements are designated (73a25-27) by the devices κατὰ πάντος (‘<holding> of all’), καθ’ αὐτό (‘<holding> by itself’), and καθ’ ὅλου<sup>167</sup> (‘<holding> of the whole’). They are defined by Aristotle:

*APo.* I 4, 73a28-b29: [I (a28-31)] I apply the term ‘<holding> of all’ to whatever does not concern some instances and not others, nor at sometimes and not at others. E.g. if animal holds of every man, then:

<sup>165</sup> *APo.* I 34, 89b10-11. Cf. II 13, 96a22-23: “hunting out the essential attributes” (θηρεύειν τὰ ἐν τῷ τί ἐστι κατηγορούμενα): see my section 2.3.

<sup>166</sup> For the technical terms ὅρος μέσος and τὸ μέσον see my section 6.11.

<sup>167</sup> I 4, 73a26-74a3. One has to read the two-words expression καθ’ ὅλου rather than the usual one-word expression καθόλου, and take καθ’ ὅλου to mean ‘<holding> of <the substrate’s nature> taken as a whole’. See De Rijk (1990a), 233f. and (1995), 79-84. Barnes, whose exposition of καθόλου (*ad loc.*) is rather confusing, thinks that “katholou is defined in a [...] unique fashion”, and even speaks (113; (1994), 111) of still “another strange use” of the word to be found at II 17, 99a34. Bäck thinks (1996, 33) that Aristotle defines ‘universal’ “in a restrictive sense, which is unusual for Aristotle”. Remarkably enough, Ross only twice writes καθ’ ὅλου (in two words), viz. at 74a29 (καθ’ ὅλου τριγώνου) and at 75b25-26 (καθ’ ὅλου αὐτοῦ), both times being apparently led to do so for grammatical reasons, because the term is followed by a substantive noun (pronoun). Unfortunately, Ross failed to see that elsewhere the expression is also often used predicatively in quite the same sense, and stuck to the awkward translation ‘universally’. A similar use of καθ’ ὅλου occurs not only elsewhere in *APo.* (esp. in II 13 and 14) but also in some of Aristotle’s other works, e.g. at *Met.* Δ 9, 1017b35, where we find the same juxtaposition of καθ’ ὅλου and καθ’ αὐτό. (See for other examples my *Index* s.vv.). — Incidentally, this use of καθ’ ὅλου should be associated with the first (intensional) sense of ὅλον which is mentioned by Aristotle at *Met.* Δ 26, 1023b26-27: “A whole’ means *that* from which no part is absent out of those of which it is said to naturally be the whole”. Notice that (quite understandably, for that matter) the one-word expression καθόλου (τὸ καθόλου) is also often found in its usual sense of ‘(the) universal’, e.g. in I 31, *passim*. Philoponus CAG XIII-3, p. 69<sup>20-27</sup> enumerates three uses of καθόλου in Aristotle: (1) when used as a universal quantifier, even in cases of non-essential assignment (‘Every man walks’); (2) when used in cases of essential, non-commensurate assignment (‘Every decade is even’); (3) when used in cases of universal, essential and commensurate assignment (‘Every triangle is 2R’). The third use (ὁ καθ’ αὐτό τέ ἐστι καὶ κατὰ πάντος καὶ πρώτως) is correctly said to be the one that is required for there being a proper epistemonik proof.

if it is true to call this particular person a man, it is true to call him an animal too; and if he is now the former, he is the latter too. [...]

[2 (a34-b5)] One thing falls to another in virtue of itself both [2a] if it falls to it in the line of the latter's quiddity (ἐν τῷ τί ἐστίν) — e.g. 'having lines'<sup>168</sup> to 'being a triangle', and 'having points' to 'being a line'; for these are constitutive of their being, and are contained in the account which discloses the substrate's quiddity — and also [2b] if the things it falls to occur themselves in the account which discloses <the attribute's> quiddity; e.g. 'being \*a'<sup>169</sup> straight' falls to 'being a line' (and so does 'being \*a curved'), and 'being \*an odd' and 'being \*an even' to 'being a number'; [...]; and for all these [viz. 'being \*a straight, \*an odd' etc.] there inheres in their own quidditative account 'being a line' and 'being a number', respectively. [...] — And what falls to something in neither way I call 'what holds coincidentally' (συμβεβηκότα), such as 'being educated' or 'being white' falls to 'being an animal'.<sup>170</sup>

[3 (b26-29)] I call '<holding> of the whole' whatever falls to something both of every instance and in itself and, <in addition,> as such (ἢ αὐτό). It is evident, then, that whatever holds of the whole falls to the things in question<sup>171</sup> (τοῖς πράγμασιν) of necessity. The expressions 'in itself' and 'as such' mean the same thing.

These requirements may be summarized thus:

(1) The appellation should belong to the substrate κατὰ πάντος (= 'holding of every instance' or 'universally'), i.e. it should apply to each member of the substrate's class: '*F* falls (ὑπάρχει) to every (*x*)'. E.g. 'Being an animal falls to every instance of being a man', meaning that every man can be truly brought up as 'this animal'.

(2) The appellation should belong to the substrate καθ' αὐτό ('in virtue of itself' or 'essentially'), i.e. it should be said of the substrate in virtue of either (2a) the substrate's or (2b) the appellate's proper

<sup>168</sup> Lit. 'being \*lined'. The idea that, as usual, connotative or 'intensional be' is included seems to be corroborated in this case by the collective use of the singular γραμμή. Zabarella exhorts us (*ad loc.*) to take these terms *sano modo* to be used elliptically, e.g. 'line' for 'contained by a line'; see Barnes, 114; (1994), 112f. See also Detel II, 123: 'durch drei Linien begrenzt'.

<sup>169</sup> That such barbarisms (indicated by prefixing an asterisk '\*') are hardly avoidable in English will be argued for presently.

<sup>170</sup> It should be noticed time and again that 'what is coincidental' does not refer to a class of accidental beings, as opposed to the (putative) domain of 'essential or subsistent being'. The expression is throughout used as determining our manner of conceiving of (subsistent) things, namely after a mode of being coincidental to that mode of being we are actually focussing upon. Thus if the 2R-property of, say, scalenes is in order, their essential feature of 'scaleness' falls to them κατὰ συμβεβηκός. There is much confusion about this device among the commentators. The correct view is found in Detel II, 127, who is right in considering the συμβεβηκότα not 'Dinge' but 'Sachverhalte'.

<sup>171</sup> My rendering of the definite article.



nature. Thus *F* belongs to every (*x*) in virtue of the nature of (*x*), or in virtue of the mode of being after which the attribute is itself called up. For instance, (2a) 'Being a line' belongs to 'what is a triangle',<sup>172</sup> or (2b) 'being a straight' belongs to 'what is a line', respectively.<sup>173</sup>

The (2b) case may raise the intriguing question what is meant by the statement "'being straight' belongs to 'what is a line'" as used as an instance of essential appellation. For while 'having lines' essentially belongs to 'being a triangle' [2a], 'being straight' is not essential for being a line, since a line may be curved as well.<sup>174</sup>

This is true, but we should be aware of two things. First, Aristotle instances properties that are disjunctively essential: 'straight and 'curved' with reference to line, 'odd and 'even' to number, 'equilateral' and 'oblong' to certain mathematical figures. Second, what seems to be more to the point: speaking of e.g. τὸ εὐθύ, Aristotle refers to the substrate, 'straight line' rather than to the property of being straight, so that it is better to render it '\*the straight' (unidiomatic for 'the straight line'). As a matter of fact, Aristotle's proper intention is obscured by renderings such as in English 'straight belongs to line' (Barnes, *ad loc.*). For unlike English, Greek — like French ('la droite'), German ('die Gerade'), and Dutch ('de rechte') — allows us to use the adjective in the neuter singular substantivated form *lit.*, '\*the straight', without adding the substantive γραμμή ('line', 'ligne', 'Linie', 'lijn'), as is customary in English. Whenever the word 'line' is added to '\*the straight', Aristotle's statement becomes rather trivial ('being a line' is an essential component of 'being a straight line'), while his saying that '\*the straight' as well as '\*the curved' are essentially lines, or that '\*the odd' and '\*the even' are essentially numbers makes good sense, and rightly brings forward the specific geometrical sense of τὸ εὐθύ: as a result of this it cannot be taken to just stand for anything straight whatsoever, say, a straight jacket or a straight whiskey. Incidentally, it may now be clear why Aristotle instances disjunctive essential properties to clarify his point. The nature of the strict disjunction ensures that the application of

<sup>172</sup> Taking this ambivalent expression indiscriminately for both the property (connotatively) and that which is a triangle (denotatively). See the semantic Main Rules (our section 1.71).

<sup>173</sup> At 73b5-24 two other uses of the phrase καθ' αὐτό are discussed. Ross, 519f.; Barnes, 115ff.; (1994), 114-20; Detel II, 129ff.

<sup>174</sup> Van Rijen (1989, 170) is of the opinion that the notion of belonging καθ' αὐτό does not always imply belonging κατὰ πάντος. To him, it is only true that belonging both κατὰ πάντος and καθ' αὐτό implies belonging of necessity.

the terms in question is restricted, such that the two can only stand for line and number, respectively.<sup>175</sup>

(3) The attribute should belong to the substrate καθ' ὅλου ('<holding> of the whole'), i.e. it should be said of the substrate in virtue of the substrate's *complete* nature: 'F belongs to [x] in virtue of the complete nature of [x]'. E.g. 'Being 2R'<sup>176</sup> belongs to 'being a triangle', when taken as the totality of its quidditative constituents.

As is easily seen, these requirements are cumulative, such that the third one comprises the other two and adds a further restrictive notion. This is specified by Aristotle in the subsequent lines by means of two alternative devices, ἢ αὐτό and καὶ πρώτου:

*Ibid.* 4, 73b27-32a1: It is evident, therefore, that whatever holds of the whole, of necessity holds of its substrate. The 'in itself' and 'as such' come down to the same thing. For example, 'containing points' and 'being \*a straight' fall to what is a line in itself (for qua being a line), and 'being 2R' belongs to triangle qua triangle (for the triangle is in itself 2R).

The author goes on to clarify the difficult notion of καθ' ὅλου by introducing another alternative phrase, viz. καὶ πρώτου<sup>177</sup> (i.e. καὶ <κατὰ> πρώτου = 'and <holding of the subject> as first or primitive'). Along the same line of thought the substrate is called 'primitive or first subject' (πρώτον):<sup>178</sup>

*Ibid.* 4, 73b32-74a4: <The appellation holding> 'of the whole' (τὸ καθ' ὅλου) applies in all those cases only when (τότε ὅταν) it apparently holds of any chance instance,<sup>179</sup> and primitively<sup>180</sup> so. E.g. 'being 2R' does not apply to figure wholly — yet one may show of a figure that it

<sup>175</sup> Another non-disjunctive instance could be 'isosceles', which is exclusively used for a special triangle, and, accordingly, includes in its quiddity the notion 'being a triangle' ('triangularity'), all owing to the linguistic fact that this word is not used to stand for, say, a cow having equal legs.

<sup>176</sup> 'Being 2R' is a short-hand formula for 'having interior angles equal to two right angles'.

<sup>177</sup> At *APr.* II 21, 66b20-22 and at *Met.* Z 6, 1031b13ff., Aristotle juxtaposes πρώτον and καθ' αὐτά. For this juxtaposition, see Bonitz, *Index*, 653a26ff. For the use of πρώτον in connection with καθ' ὅλου (as Latin 'primum' when used in 'primum subiectum'), see *ibid.*, 653a35ff., esp. πρώτῳ ὑπάρχειν, *syn.* οὐκ ἔστιν ἄλλο μεταξύ (*APo.* I 19, 81b31; 82a11), and Bonitz, *ibid.*, 653a52-59. A pertinent assessment of the καθ' ὅλου καὶ πρώτου device is found in McKirahan (1992), 97ff.

<sup>178</sup> The notion of 'first subject' became pivotal in the Medieval discussions of the καθ' ὅλου requirement (called 'universale et primum'). See De Rijk (1995), 105-14.

<sup>179</sup> I.e. any substrate if it is appropriately appellated. E.g. 'being 2R' when said of a thing if it is brought up as 'triangle'.

<sup>180</sup> Barnes's attractive adverbial rendering of the adjective πρώτον.

is 2R, but not of a chance figure, nor does one use a chance figure to show it; for the quadrangle *is* a figure but it is not 2R; on the other hand, any chance isosceles *is* 2R, but not *qua* primitive (ἀλλ' οὐ πρῶτον); 'being a triangle' is prior. If, then, any chance instance <of triangle> turns out to be 2R (or whatever else) as the primitive substrate, it [i.e. the property of being 2R] belongs to it *qua* primitive <substrate> as holding of the whole (καθ' ὅλου) <quiddity of being a triangle>. And of this [i.e. the triangle] taken in itself the attribute under demonstration<sup>181</sup> holds of the whole. But of the others [i.e. quadrangle, isosceles etc.] it holds in a way (τρόπον τινά), not in itself; and thus it does not hold of the isosceles 'of the whole of its quiddity', but in a wider range.

The phrase 'and that primitively' is of the utmost importance. Aristotle means to say that the attribute ('appellation') under discussion should be such as to be assignable to the first class of substrates to which it belongs in itself. Take, for example, the formula

(1) 'Being 2R belongs to triangle', meaning 'what is a triangle may be brought up as a 2R entity' or, in the form of a statement, 'Every triangle is 2R'

as contradistinct from

(2) 'Being 2R belongs to isosceles', meaning 'what is an isosceles may be brought up as a 2R entity', or, statementally, 'Every isosceles is 2R'.

The apt investigator who observes all three of the requirements an epistemonik proof has to meet, will understand that (2) is not an appropriate premiss as far as the essential attribute 'being 2R' is concerned, because this attribute does not belong to the isosceles *qua* isosceles, i.e. in virtue of its own *complete* nature, but only in virtue of part of its nature, its being a triangle, that is. To be sure, (2) is perfectly true, and for Aristotle, even a necessarily true proposition. However, it will not do for framing a proper demonstration concerning the property 'being 2R', since this property is only essentially related to the object's being a triangle, and has, properly speaking, nothing to do with its being an isosceles *qua* isosceles.

The importance of the καθ' ὅλου requirement is elucidated in chapter 5, where mistakes concerning this requirement are discussed.<sup>182</sup> They occur particularly in such cases in which the two

<sup>181</sup> The word ἀποδείξις must be taken here in the sense of 'attribute under demonstration' rather than 'demonstration', because Aristotle is not talking about different types of demonstration but of different types of attribute. For a parallel see below, my next note. On the other hand, at I 24, 85a13, the phrase ἀποδείξεως τῆς μὲν καθόλου, τῆς δὲ κατὰ μέρος does refer to different types of demonstration corresponding to the use of different types of attribute.

<sup>182</sup> For the text, my section 5.7. Another nice example is found at *Met.* Z 4,

other requirements ('universally' and 'in itself') seem to be duly fulfilled. We make errors on this score, Aristotle warns us (74a6-13), when either (a) we cannot grasp anything higher apart from the particular; or (b) we can, but it is nameless for objects that are specifically different; or (c) that of which it is shown to apply in fact only meets part of the substrate's quiddity. In all such cases it may escape our notice that the attribute that is being proved does not apply as a primitive or as the whole of the substrate's quiddity, as was argued for in the above discussion.<sup>183</sup>

The (a) case occurs whenever we are unable to conceive of any quidditative mode of being which is superior to (i.e. more specific than) that by which the object is brought up, with the result that, as long as it is called up after the initial, less specific mode of being, the attribute ('appellation') under discussion may surely apply to it universally (κατὰ πάντος), and even essentially (καθ' αὐτό), but definitely not in the appropriate way discussed above (καθ' ὅλου), that is to say, such that the attribute (intended in the syllogistic conclusion) precisely covers the whole quiddity of the substrate. In fact, in case (a) the name by which the substrate is actually brought up is too vague and should be made more specific. For example, this happens if the 2R property is assigned by us to this or that particular thing, say the tympanum of this or that temple, just qua being this particular, and we are unable to find alternative appellations, such as 'mathematical figure', 'triangle', 'isosceles', and so on.

Case (b) happens whenever we *are* aware that the object should be brought up under a more specific mode of being than just 'being a thing' or 'being an entity', but we cannot find the appropriate name for it, i.e. the one that precisely matches the attribute under discussion. E.g. in the case of the 2R-attribute, this happens if we do not have the appropriate appellation ('name'), 'triangle' at our disposal.<sup>184</sup> In such cases, the appellations used for the object may be so vague that it even fails to meet the two other requirements, 'universally applying', and 'essentially applying'.

The third case (c), finally, is aptly represented by Aristotle's favourite, 'being an isosceles'. If we were to use the alternative name 'isosceles' for our tympanum (supposing that it really is one), then we have selected, unfortunately enough, a too specific name to do

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1029b16-18; my section 9.31 in Vol. II.

<sup>183</sup> This passage is discussed in my section 2.76; cf. 6.71-6.73.

<sup>184</sup> In the biological works there are plenty of instances of such a case.

the job. By bringing up our tympanum under the appellation 'isosceles', we are overreaching our goal; for whereas the property of being 2R surely meets the quiddity of isosceles, it matches only part of this quiddity, viz. the constituent 'being a triangle'. By the way, the isosceles case illustrates the (b) case at the same time. "Supposing, Aristotle writes (74a16-17), there were no triangles other than isosceles, the property 'being 2R' would seem to apply to it qua being an isosceles"; for in that case, there would not exist a name for the property of triangularity.

In the concluding part of chapter 5, Aristotle summarizes the global lines of his view of correct epistemonik proof with reasonable clarity. He takes great pains to make his intentions clear, by contrasting the correct procedure with the mistakes that were said (74a4) to occur so frequently:

*Ibid.* I 5, 74a25-32: For this reason, even if one is going to show (δείξει) of each particular triangle — either by one single proof (ἀποδείξει) or by different ones — that each has two right angles, and so separately for the **equilateral**, the scalene, and the isosceles, one is still not aware (οὐπω οἶδε) of the triangle that it has two right angles, except in the sophistic fashion,<sup>185</sup> nor that this holds of the triangle commensurately [*lit.* 'of its as a whole'],<sup>186</sup> not even if there is no other triangle apart from these. For the man does not have this awareness [viz. of the equilaterals, the scalenes etc. being 2R] of them qua being a triangle; nor even of every triangle, except numerically (κατ' ἀριθμόν),<sup>187</sup> but not specifically (κατ' εἶδος) of every instance of it (οὐ πᾶν), even if there is no triangle which he does not know to possess it.

This will naturally lead to the question, when will there be genuine cognition, and when will we fail to have it? In light of the earlier approach to this question (when he contrasted the correct method with malpractice), Aristotle departs from the question *when* one fails to arrive at cognition according to the καθ' ὅλου criterion. Note that he is still speaking about the correct assignment of the 2R-property:

<sup>185</sup> I.e. ignoring that, as far as the property of being 2R is concerned, these figures' being equilaterals, scalenes, or isosceles is merely coincidental to their having this property. The Sophists are frequently portrayed by Plato and Aristotle as only interested in accidental things, and as people who pretend to teach us about a thing's true nature, while they merely focus on its coincidental features. See also *SF* 6, 168a36-b4.

<sup>186</sup> Here Ross rightly (*pace* Barnes) reads καθ' ὅλου instead of the common reading καθόλου (which commonly leads to the unfortunate rendering 'universally' = κατὰ πάντος). However, Ross (526) keeps rendering this phrase 'universally'.

<sup>187</sup> That is to say, not of every triangle intensionally ('triangularity'), but perhaps extensionally ('this triangle, that triangle, that triangle, and so on), by experiencing this property in the whole number of particulars perceived.

*Ibid.* 5, 74a32-36: *When*, then, does one fail to acquire cognition meeting the kath'holou requirement, and *when* is there cognition without this requirement being met (ἀπλῶς)? Well evidently <the latter is the case> if it were the same thing to be a triangle and to be equilateral <or to be scalene or to be isosceles> (either each of them or these three taken together).<sup>188</sup> But if this is not the same but different, and <the 2R-property> applies <to each of them> qua being a triangle, you fail to be aware, though, whether<sup>189</sup> it applies qua being a triangle or qua being an isosceles.

In the next few lines Aristotle goes on to provide the pivotal question of how to avoid the immanent errors with an answer — by elucidating the process of singling out that one among the object's modes of being which commensurately suits the intended attribute. Fortunately, he shows how to use the rather vague rule of thumb by once again instancing the 2R-property:

*Ibid.* 5, 74a36-b4: And *when* does it apply in virtue of 'triangle' qua primitive (ᾧ) πρῶτον), and of *what* does the attribute under demonstration (ἣ ἀπόδειξις) hold commensurately (καθ' ὅλου)? Clearly when after a process of stripping away <certain modes of being of the object>, the property still applies to the substrate in its primitive mode of being (πρώτῳ). For example, the 2R-property will belong to a brazen isosceles triangle. Well, this will still be the case when its being brazen and its being an isosceles are stripped away, but not when its being a figure or its being a closed figure are; <the latter mode of being surely cannot be stripped away>, but these modes are not primitive. Of what, then, does it hold as its primitive? Well, if <it is said to hold> of its being a triangle, then it is in virtue of this mode of being that it also belongs to it in its other modes of being. And so it is of the object's being a triangle that the attribute under demonstration holds commensurately (καθ' ὅλου; *lit.* 'of the whole').

Anticipating my later discussions (my sections 6.51-6.59; 6.71-6.73; cf. 6.2), the following picture of the epistemonik process may arise. If we are to prove deductively that this or that particular tympanum is a figure whose interior angles have a sum-total of 180 degrees ('is 2R') we must, firstly, recognize that it may be truly called up ('categorized') as 'being a tympanum', 'a mathematical figure' etc.; from now onwards, it is taken after one of its universal modes of being, a mode of being, that is, which it has in common with others. Next we have to

<sup>188</sup> Aristotle means to say: regardless of whether you take the three equations, 'equilateral = triangle', 'scalene = triangle', 'isosceles = triangle', or the single one, 'triangle = equilateral, scalene, isosceles'. Ross (1949), 526.

<sup>189</sup> Omitting the full stop after οἶδεν, and taking πότερον δ' ('though, whether') to introduce an oblique question conveying an opposition; cf. Liddell & Scott, s.v. II, b.

scan the object, so to speak, by focussing on precisely that mode of being which completely covers the attribute under examination, and does not go “further than it” (74a3: ἐπὶ πλεόν). This manner of applying is precisely what is meant by the device ‘holding of the whole’ (καθ’ ὅλου), and is, therefore, best rendered ‘holding commensurately’.

It is not until now that the three conditions (or rather the one cumulative καθ’ ὅλου condition) for framing an apodeictic syllogism have been fulfilled. Taking now the first figure syllogism *par excellence* (*Barbara*),<sup>190</sup> we arrive at a proof like this:

The property of being 2R commensurately applies to being a triangle;  
being a triangle universally applies to being a tympanum;  
therefore being 2R universally applies to being a tympanum.

The final step consists in applying this conclusion to my particular instance,<sup>191</sup> the tympanum of this temple. In fact, our deduction may also be condensely read thus:

The property of being 2R applies to this particular tympanum in virtue of its being a triangle.

From the semantic point of view an important corollary may be drawn from this discussion. What this process is all about is the correct categorization of the object to which the intended attribute is to be assigned. Such a correct categorization hinges on whether you are able to find that mode of being which, qua ‘holding commensurately’, nicely mediates between the object and the attribute. For this reason, the kernel act is not, properly speaking, to predicate of the object what is conveyed by the so-called ‘middle term’, but to appellate the object in the appropriate way, i.e. ‘commensurately’. This can be done by modifying it by means of the ‘in virtue of’ device or qua-functor.<sup>192</sup>

<sup>190</sup> In *APo.* I 14, 79a17-32 it is claimed that the syllogisms of the first figure are most epistemonical, since the quiddity of things can only be hunted for in this figure.

<sup>191</sup> I reject Barnes’s evaluation of the position of singular terms in Aristotelian syllogistics. He is of the opinion (141; 1994, 146) that where singular terms “creep into Aristotelian syllogisms, Aristotle tacitly treats them as general terms”; see also Barnes, 168.

<sup>192</sup> My sections 2.71-2.76. *APo.* I, 4-5 are also aptly commented upon by Lennox (1987), 91-4. — In this context Detel’s exposition (I, 172-7) about the applicability of syllogistics to the objects of the several disciplines is illuminating, as are his observations (*ibid.*, 189-232) about the status of mathematics and the role of geometrical ‘abstraction’. In Cleary (1995), 268-344 and 424-91, Aristotle’s view of

6. 35 *On the notions 'necessary' and 'commensurate'*

The aforesaid three requirements all have to do with the basic condition of any epistemonik proof, that of having necessary premisses, i.e. premisses which refer to states of affairs that cannot be otherwise. The necessity involved here is what Aristotle has labelled 'absolute necessity' in *APr.*<sup>193</sup> That the basic condition for any apodeixis is to start from absolutely necessary premisses is confirmed throughout *APo.*, particularly in the chapter that immediately follows the discussions of the three requirements found in the chapters I, 4-5. In point of fact, in chapter 6 Aristotle gives a more elaborate version of what he had already observed earlier<sup>194</sup> about the notion of necessity and its indispensability in matters of apodeixis:

*APo.* I 6, 74b5-12: Now given that epistemonik knowledge proceeds from necessary starting-points (for what one really knows cannot be otherwise), and that what belongs to the objects in themselves is necessary (for some of them belong <to them> in what they are, while others have things of which they are said inherent in what they are,<sup>195</sup> in which case one of a pair of opposite attributes must apply)<sup>196</sup> — it is evident that the epistemonik syllogism will proceed from things of this sort [i.e. necessity]. For everything holds either in this way <of something else> or coincidentally; but what is coincidental is not necessary.

Aristotle then sets out to make clear what, unlike arguments from coincidentals, epistemonik proof boils down to:

*Ibid.* 6, 74b12-18: Thus we must either argue like this, or by positing as a starting-point that epistemonik proof implies its object's necessity,<sup>197</sup> meaning that if something has been proved it cannot be otherwise. Accordingly, the deduction must have necessary premisses. For from true premisses you can deduce even without genuine proof, but from necessary ones you can only deduce by way of proving, for this is precisely what epistemonik proof is all about.

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the status of mathematical is discussed in a broader, historical and doctrinal context. See my section 2.73 for some criticism of his view.

<sup>193</sup> *APr.* I 10, 30b30-33; 38-40. See my section 6. 12 above.

<sup>194</sup> I 2, 71b10-16; I 4, 73a21-27. This notion plays a decisive role throughout *APo.* So I 33, 88b30ff.; II 13, 96b3ff. Cf. the associate notion of 'eternal', I 8, 75a21ff.

<sup>195</sup> Aristotle is alluding to the (2b) sense of καθ' αὐτό discussed in my section 6.34.

<sup>196</sup> Here Aristotle introduces the notion of 'what is disjunctively necessary', which was to be central in Medieval, particularly Scotistic, metaphysics.

<sup>197</sup> I.e. 'concerns things that are necessary' (reading ἀναγκαίων).



The practice of disputation, too, can be adduced in support of this view on the pivotal role of starting from necessary premisses. Whenever we are rebuking our opponent's statements, we object that it is unquestionably possible that things are otherwise, or at least we say so for the sake of argument. As a matter of fact, it is a common conviction that those people are silly who think they have an effective starting-point if the premiss is merely reputable and true, and not, in addition, necessary. Such are the sophists, who are of the opinion that to know comes down to possessing a piece of genuine knowledge, no matter, that is, whether or not you are yourself able to prove it epistemically.<sup>198</sup> It is not reputability that counts, but the fact that the substrate the proof is concerned with is primitive (τὸ πρῶτον τοῦ γένους). In a word, you should know 'the reason why' (λόγον τοῦ διὰ τί), which completely depends on your being certain of the necessity of the middle (i.e. the mediating state of affairs). Nothing prevents us from being aware of a necessary conclusion, while the middle by which it was proved (ἀπεδείχθη) does not signify a necessary state of affairs: for one can deduce what is necessary from what itself is not, just as what is true from what is not true. But genuine knowledge of a necessary truth depends on your having a necessary middle at your disposal (74b18-75a17).

That is why concerning things that do not fall to their substrates in virtue of themselves (μὴ καθ' αὐτά) in the aforesaid (twofold) sense,<sup>199</sup> there is no epistemonical proof. Aristotle once again points out the importance of the καθ' αὐτό and καθ' ὅλου (which is here represented by the ἦ and πρῶτον devices) requirements. It should be emphasized that the notion of necessity is already implied in the καθ' αὐτό requirement, but in the Aristotelian epistemonical procedure, necessity is in a way narrowed down to καθ' ὅλου necessity, i.e. the necessary link between the commensurate attribute and the subject it primitively belongs to.<sup>200</sup>

<sup>198</sup> Plato, *Euthyd.* 277B; *Theaet.* 197A.

<sup>199</sup> I 4, 73a37ff.; 74b8ff. Aristotle strikingly (cf. 75a21-22) rules out the so-called 'essential attributes' discussed elsewhere, and sticks to the 'coincidental' = 'non-necessary' concept of *Top.* I 5, 102b4-7. *Pace* Barnes (127; 1994, 129), no 'incidentals which are not "in itself" incidentals' are meant. In fact, συμβεβηκός is often used just to stand for what falls to something, no matter whether it is essential or coincidental.

<sup>200</sup> Cleary (1995, 314 and 491) aptly defines the use of the qua-locution as the logical method of identifying the primary subject of any given attribute.

The key role of the specific categorial appellation commensurately suiting the attribute under examination is given due attention. The main idea is that, if the καθ' αὐτά connection between the attribute and the substrate, when this is taken in the suitable, commensurate generic appellation, is assigned, the καθ' ὅλου requirement is *eo ipso* fulfilled.<sup>201</sup>

*Ibid.* 6, 75a28-35: Since concerning each genus whatever attribute <falls to a thing> by itself (καθ' αὐτά) and as such (ἢ ἑκαστον) falls to it of necessity, therefore it is evident that epistemonik proofs are about what belongs to things by themselves *and* proceed from such things. For what is coincidental is not necessary, so that < in such proofs> one does not necessarily comprehend *why* it [the attribute] applies — not even if it should always be the case, though not in itself (as in deductions through signs);<sup>202</sup> for one will not know the essential (τὸ καθ' αὐτό) state of affairs, either qua essential or by its reason, whereas to know the reason of something is to know it through its cause.

The outcome is stated (75a35-37) in terms of the syllogistic procedure to be observed for there to be a genuine epistemonik proof: “Therefore, what is expressed by the middle must fall to what is expressed by the third term, and what is expressed by the first to what is expressed by the middle, because of itself” (δι' αὐτό).<sup>203</sup>

In chapter 7 the requirement of ‘commensurateness’ (καθ' ὅλου) is refined in light of the objectives of the different disciplines. To begin with, the three basic components of any epistemonik proof are enumerated (75a39-b2): (a) the attribute to be proved to apply, being that which falls to some substrate taken in its appropriate categorial appellation (τὸ ὑπάρχον γένει τινί) by itself; (b) the prerequisite starting-points (ἀξιιώματα); and (c) the substrate as designated by the appropriate categorial appellation (‘the underlying genus’; τὸ γένος τὸ ὑποκείμενον), of which the proof discloses the attributes, to wit, those that fall to it by itself.<sup>204</sup>

<sup>201</sup> This idea is commonly not given due attention by the commentators, and clearly ignored by Detel II, 147f.; 162f, and in the usual translations as well, in all of which the καί = ‘also’ (at a 29) is wrongly taken as a mere connective (‘and’).

<sup>202</sup> The proofs starting from probabilities or signs are discussed in *APr.* I, 27.

<sup>203</sup> The device δι' αὐτό (‘because of itself’) including καθ' αὐτό (‘by itself’) as claimed at *APo.* I 4, 73b13-14, clearly suggests the equivalence of δι' αὐτό and ἢ (and καθ' ὅλου).

<sup>204</sup> Taking καί expegetically, and συμβεβηκότα adjectivally (to τὰ πάθη). The πάθη disclosed by an apodeixis, by definition, are essential ones. Throughout the present discussion συμβεβηκότα refers to essential attributes, except for 75b12, where the word is explicitly opposed to καθ' αὐτά. For the important role of

The prerequisite starting-points may be the same, but of the disciplines whose genus is different, like arithmetic and geometry, one cannot adapt an arithmetical proof to geometrical attributes, unless extended magnitudes are numbers. Clearly, the differentiation of the appropriate objects according to the several disciplines is quite in line with Aristotle's general view of looking for the appropriate object which is to commensurately suit the attribute under discussion. Therefore, if the proof is to be of the genus-crossing type, there should be a sameness of object, either *simpliciter* or in some respect. If not, there can merely be a coincidental connection between an attribute and a substrate, since, in the case of a genuine proof, it is indispensable for the extreme and the middle to come from the same genus.

The chapter winds up by clarifying the differences and similarities between the disciplines. To prove that there is a single discipline of opposites pertains not to geometry (but to logic), not even that two cubes make one cube (this falls to arithmetic). Nor can one prove a theorem of one discipline by another discipline, unless the disciplines are subordinate to one another, like optics to geometry, and harmonics to arithmetic. And as for a discipline's special object, nothing that does belong to it, but not by itself, is susceptible of being proved according to that discipline. Thus geometry cannot decide whether some attribute falls to lines taken otherwise than *qua* lines<sup>205</sup> and *qua* derived from its own primary concepts (*τῶν ἀρχῶν τῶν ἰδιῶν*), e.g. whether the straight line is the most beautiful of lines, or whether it is the contrary of the curved: for that belongs to them not in virtue of their proper genus, but *qua* something they have in common with things from a different genus. As always, focalization plays the pivotal part.

Coming now to chapter 8, this chapter presents a brief and rather concise discussion on what is absolutely necessary about the object of epistemonik proof. As has been observed before, Aristotle emphasizes (e.g. in I, 6) that the object of genuine knowledge should as such be something necessary — something, that is, which cannot possibly be otherwise than it is. That is why the epistemonik deduction ought to proceed from necessary premisses. However, rather than meaning that the 'things' genuine knowledge is about are necessary them-

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'essential attributes', including the so-called 'proprie propria' see Van Rijen (1989), 133-45; 149-53; 165ff.

<sup>205</sup> Cf. *Met.* E 2, 1026b10-14 and 1027a19-28.

selves, Aristotle argues throughout *APo.* that necessity as involved in the epistemononic procedure is a property required for the premisses, and, accordingly, belongs to states of affairs, not to this or that particular thing taken by itself. That is why the things under investigation are preferably designated by Aristotle as *πράγματα*, i.e. things taken in certain states.

Thus epistemononic proof is about necessary relationships between substrates and attributes. When Aristotle speaks of “the principle that demonstration implies necessity” one should bear in mind that what is proved in an epistemononic proof is not a thing in the outside world, but a state of affairs as signified by the necessary connection between the special subject and its commensurate attribute. So at I 6, 75a28-30 the key-notion is ‘necessarily belonging’ rather than ‘necessarily existing’ (“Since concerning each genus whatever attribute of necessity <falls to a thing> by itself (καθ’ αὐτά) also *belongs* to each of them taken as such (ἢ ἑκάστων) as well, therefore it is evident that epistemononic proofs are about what *belongs* to things by themselves *and* start from such things.”). What is at stake is, so to speak, the ‘attributes’ belonging’ rather than the ‘belonging attributes’. For a thing’s being in itself (*per se*) is not sufficient to explain a necessary state of affairs; the latter requires that we should discover a *per se* connection between a thing’s (essential) constituents.<sup>206</sup>

In his philosophical Lexicon (*Met. Δ*), Aristotle confirms (ch. 5) this once more (where you should notice that the author is speaking of “a thing’s necessarily being so-and-so”, rather than of necessary existence *tout court*):

*Met. Δ* 5, 1015a33-35; b6-9: Again, when it is not possible for a thing to be otherwise, we say that it is necessary to be so. [...] Again, epistemononic proof is about what is necessary, expressing the fact that it is not possible for it to be otherwise, if it has been proved *simpliciter*; the causes of this are the first <premisses>, supposing that that from which the syllogism proceeds cannot possibly be otherwise.

In *APo.* Aristotle’s attention is mainly focussed on the possibility of finding necessary premisses on which to frame a ‘knowledge-producing deduction’. He is, therefore, not interested in the eternity of

<sup>206</sup> I cannot see why commentators (e.g. Barnes, 130; 1994, 133, and others; see *ibid.*) can think of “dubious moves in Aristotle’s arguments” (such as the supposed inference from ‘p is eternal’ to ‘p is about eternal objects’) or any confusion of the sort. Aristotle certainly does not have a muddled view on this score, neither in *APo.* nor elsewhere (*Phys.* IV 12, 222a3-9; VIII 1, 252b2-4; *Cael.* II 11, 281a4-7; *GA* II 6, 742b25-28; *EN* III 3, 1112a21-23).

things of the outside world (if any), but rather in the perpetuity of the truth of certain propositions about them (premisses and conclusions).<sup>207</sup> It is to find and to exploit eternal (perpetual) states of affairs that the true investigator should be after. Such states of affairs are, in fact, perpetual, commensurate connections between certain attributes and their proper<sup>208</sup> substrates.

Obviously, 'that from which the deduction proceeds' are dictums expressing states of affairs and serving as premisses of the epistemonik deduction. This becomes clear once more in *APo.* I 8, where Aristotle argues that the conclusion of an epistemonik deduction must be eternal. However, what the author apparently means to say is that perishable things are as such not susceptible of epistemonik proof, because of their own transitory way of being. And this is liable to prevent us from speaking of eternal connections:

*APo.* I 8, 75b22-30: It is also evident that if the premisses from which the deduction proceeds are commensurate (καθ' ὅλου = 'of the whole'),<sup>209</sup> then it is necessary for the conclusion of such an epistemonik proof, and of an epistemonik proof *simpliciter*, to be eternal too. There is, therefore, no epistemonik proof of what is perishable,<sup>210</sup> nor knowledge of them *simpliciter*, but only, as it were (οὕτως ὥσπερ), of something coincidental (<τοῦ> κατὰ συμβεβηκός),<sup>211</sup> because <the connection> does not hold of it [viz. the substrate] as a whole (οὐ καθ' ὅλου αὐτοῦ) but <only> temporarily and under given conditions. And when there is <such a proof> one of the premisses inevitably is not 'of the whole' (μὴ καθ' ὅλου) and <describes a> perishable <state of affairs> [...] <sup>212</sup>so that no conclusion can be drawn as holding of all cases (καθόλου), but only one as of something being the case now.

The passage just quoted is momentous. Its proper purport is not about the necessary character of epistemonik premisses, but to make

<sup>207</sup> Barnes, 130; Detel II, 190f; 192-6.

<sup>208</sup> The importance of this 'proper', and the decisive role of appropriate categorization will be clarified in my sections 6.5 and 6.7.

<sup>209</sup> I.e. if their subjects and attributes are commensurately related; my section 6.34.

<sup>210</sup> Tredennick (*ad loc.*) is right in taking these perishable 'things' to be "connections that are not eternal". "Certain connections between subjects and properties are eternal" (Upton 1991, 115, n. 5); see e.g. *APo.* II 7, 92a34-b3; *Phys.* VIII 1, 252a19-b5; *GA* II 6, 742b19ff.

<sup>211</sup> By supplying the article (or, alternatively, reading the genitive συμβεβηκός), one need not be baffled by the subsequent αὐτοῦ at 75b26, where one would expect the plural genitive αὐτῶν, referring back to φθαρτῶν at b24. Cf. the pertinent remarks in Detel II, 196, who likewise makes αὐτοῦ refer to συμβεβηκός (taking κατὰ συμβεβηκός loosely to stand for "in bezug auf Zufälliges").

<sup>212</sup> The parenthesis will be discussed below, p. 625.

clear that perishable things do not allow of epistemonik proof, since they can only jeopardize the general requirement of necessity.<sup>213</sup>

It is because, to Aristotle, all sublunar things *are* perishable, that there is ample reason to say a word about proofs concerning perishable things. Such proofs are possible, but they cannot lead to genuine knowledge straightforwardly, but only, so to speak, incidentally because of the transitory existence of these things, that is. Due attention should be given (but actually has not been by the translators and commentators so far) to the phrase οὕτως ὥσπερ at 75b25, which qualifies the device κατὰ συμβεβηκός. This qualification is quite understandable; for although there is nothing to prevent us from assigning essential (καθ' αὐτό) appellations to perishable things (e.g. 'man', 'animal', or 'rational' to Socrates), the problem is that no eternal, unchangeable connection can be stated between the perishable substrate and the attribute, but only a transitory one. However, the eternal, i.e. never changing connections between, say, manhood, animality, rationality and the concrete individual, Socrates, are only a matter of factual coincidence. And this leads Aristotle to remark (75b25) that this genuine knowledge about the individual, Socrates is, as it were, coincidental — that is to say, the occurrence of certain eternal connections (e.g. 'Socrates's being man-animal-rational' etc.) which are perceived by the knower depends on the incidental fact of his (supposed) existence.<sup>214</sup>

The καθ' ὅλου ('of the whole') device spoken of in this passage bears on the substrate taken as a whole, including its temporality as a perishable individual, so that Aristotle can rightly infer that this requirement is not properly met. However, because the καθ' ὅλου is opposed to the restrictions expressed by ποτέ, πώς and νῦν, there are good reasons to render it 'omnitemporally',<sup>215</sup> on the proviso that it should still be distinguished from the first requirement κατὰ πάντος

<sup>213</sup> Cf. *Met.* Δ 5, 1015b11-15; E 2, 1027a19-28; K 8, 1064b17-32; *EN* VI 3, 1139b19-25. Note that to Aristotle, immanent forms are 'eternal' in the special sense that there is an eternal generation of the (intensionally) same form which is successively enmattered in perishable particulars. "Form is eternal only by virtue of the never-failing succession of its embodiments" (Ross 1949, 175).

<sup>214</sup> Cf. *Met.* Z 15, 1039b27-1040a5. Also *Phys.* IV 12, 222a2-7, where it is claimed that the pragma 'that-the-diagonal-is-incommensurable' always *is* ('is eternal'), but never will be 'in time'.

<sup>215</sup> The transition from the sense 'of the whole' to 'on the whole' or 'generally', 'omnitemporally' is easier than it might seem at first glance. It is noteworthy that in the Greek manuscripts the term is always written as a one-word expression (ΚΑΘΟΛΟΥ), the reading καθ' ὅλου being just a matter of editorial orthography.

(‘holding universally’ = ‘of all instances’), since the present paragraph does not contain any idea of quantification at all.<sup>216</sup>

In the lines 75b27-29 (omitted above), Aristotle explains the use of the qualifications ‘perishable’ and ‘not omnitemporally’, but part of the text is paleographically uncertain.<sup>217</sup> The label ‘perishable’ assigned to the premiss is accounted for thus (75b27-28): “It is perishable because its being perishable is required to make the conclusion perishable”. Line 75b29 is handed down differently in the MSS and the Greek commentators. I propose to read it thus: ὅτι τό(τε) μὲν ἔσται τό(τε) δ’ οὐκ ἔσται <τὰ><sup>218</sup> ἐφ’ ὧν, which makes a28-29 mean: “it is not omnitemporal, because the state of affairs it is concerned with (τὰ ἐφ’ ὧν) will on and off be the case and not the case”.

As to proving perishable or temporary connections, such cases, too, are taken quite seriously, as is sufficiently clear from Aristotle’s favourite example of eclipses of the moon, which he also puts forward at the end of the present chapter. We have to address the general issue of how to obtain genuine knowledge about transitory, particular objects on several other occasions, e.g. at *APo.* I, 31.

Speaking of the special problems concerning perishable things in the context of epistemonik proof, it is natural that definitions should come up for discussion, since these, too are about non-perishable things. And, Aristotle means to say, definitions (ὀρίσμοί) have to do with epistemonik proof, “inasmuch as definition is either a starting-point of epistemonik proof, or something differing from it only in arrangement, or a sort of conclusion of an epistemonik proof”. As will be made clear later on (Book II, ch. 10), definitions too are concerned with perishable particulars in a special way, i.e. by grasping them in their quiddity.

After this aside on the different senses of ‘definition’, Aristotle concludes the short discussion of genuine knowledge of transitory things by briefly pointing out (75b33-36) how we should regard the epistemonik process in such cases. The proofs and pieces of knowledge concerning things that come about time and again, such as the eclipse of the moon, clearly always hold in so far as they bear on a thing of such-and-such a nature, but they concern particular cases (κατὰ μέρος εἰσίν) in so far as they have no general purport; and as it is with the eclipse, so it is in the other cases. Thus Aristotle has

<sup>216</sup> Ross, 534f. (re 75b28-29).

<sup>217</sup> Ross, 534f.; Barnes, 131; 1994, 133; Detel II, 196.

<sup>218</sup> Barnes, *ibid.*

sketched in a nutshell his view of epistemoni proof. Properly speaking, this type of proof concerns only what is beyond instability. Therefore it can only be concerned with what is perishable by focussing on what is permanent in such a thing. This train of thought is predominant throughout Aristotle's thought about the things there are, both in and outside *Metaphysics*. In effect, this view is his answer to Plato.

In his other works, too, Aristotle emphasizes the significance of this approach. For instance at *EN* VI 3, where he succinctly describes the five states of mind in virtue of which the soul acquires truth by way of a non-discursive consent or dissent (τῷ καταφάναι ἢ ἀποφάναι), to wit, skill (τέχνη), genuine knowledge (ἐπιστήμη), practical wisdom (φρόνησις), philosophic wisdom (σοφία), intuitive reason (νοῦς); the discursive ways, assumption and opinion (ὑπόληψις and δόξα) are excluded, because in these error is possible (1139b15-18). He goes on to outline (1139b18-35) the epistemoni procedure, in which the preparatory role of induction looking for the universal element in the contingent particulars nicely counterbalances the proper procedure which focusses on the state of affairs concerning these particulars with its non-transitorial ('eternal') validity, which is the proper object of epistemoni proof.<sup>219</sup> Clearly as in the discussion at *APo.* I 8, 75b21-30, to Aristotle, the αἰδία referred to in this context are not eternal entities such as celestial bodies, let alone Platonic Forms, but necessary truths like 'that-man-is-rational', which obtains despite the fact that every instance of 'rational man' is contingent (ἐνδεχόμενον):

*EN* VI 1039b18-24: Hence the exact nature of genuine knowledge is clear [...]: we all assume that what we genuinely know cannot possibly be otherwise; for of what can be otherwise it holds that when they have come beyond the range of our observation, their existence or non-existence escapes us. Therefore the object of genuine knowledge is of necessity; hence eternal, for things that are of necessity in the unqualified sense are all eternal.<sup>220</sup>

In chapter 9, finally, the line of thought of chapter 7 is continued, in that a special case of inappropriateness of a given proof is dealt with.

<sup>219</sup> Cf. *An.* I 1, 402b25-26, and III 6, 430b28-29, where the fallibility of discursive reason is in order.

<sup>220</sup> This definitely does not mean that Aristotle has an 'ontology of facts'. Rather, the 'perennials' concern logical relationships, such as that between 'man' and 'animal' or 'triangular' and 'being 2R', which are based on my definitions of 'man' and 'triangle'. Hence the perennials are mental entities *cum fundamento in re* (using a later terminology), their 'perpetuity' bearing, that is, on the existence of successive instances of manhood and triangularity.



The defect under discussion concerns the 'as such' requirement, which is not properly met because the attribute is assigned to the substrate as designated by too broad a generic appellation, so that the proof will be applicable to other things falling under that genus, too. The result will be a lack of real commensurateness — the 'whole' that is involved in the 'of the whole' device being too broad, extensionally — and thus the epistemonik proof is frustrated. In fact, the proof will then proceed κατὰ συμβεβηκός:

*APo.* I 9, 75b37-76a3: Though (ἐπεὶ)<sup>221</sup> it is evident <from the previous discussions> that one cannot prove anything epistemonically except from its own starting-points, if what is being proved should belong to the substrate taken as <precisely> *that* thing, there is not yet genuine knowledge if just *this* condition is fulfilled that the proof proceeds from what is true and non-demonstrable and immediate. [...]. For such arguments prove in virtue of something common which will also apply to something else; hence these arguments are also applicable to other things which are not of the same kind. This means that you do not know the attribute as holding of the substrate as such, but only coincidentally; <this is really so>, for <otherwise> the proof would not be applicable to another kind as well.

This is evidenced by the favourite 'triangle-2R' example (76a4-15).<sup>222</sup> The chapter winds up with two general sequels from the foregoing discussions. First (76a16-25): since each discipline has its own starting-points, corresponding to its own proper genus, there is no supreme discipline proving common starting-points, because this would transcend not only the special starting-points, but also disregard the different genera proper to the special disciplines, as a result of which knowledge of the proper genus as such would be impossible. The only exceptions to the rule occur when disciplines are subordinate to one another, such as mechanics and optics to geometry, or harmonics to arithmetic.

<sup>221</sup> The causal 'since' would be awkward. For the present sense of ἐπεὶ cf. *HA* VII 11, 587b30-31: "So long as there is a flow of milk the menstrual purgations do not take place, at least as a general rule, *though* (ἐπεὶ) the discharge has been known to occur during the period of suckling" (*Oxf. Tr.*); Van Raalte (1993), 460f. (re Theophrast, *Metaph.* 9b17). For ἐπεὶ in the sense of 'but for all that' see e.g. *HA* V 5, 541a32, and our *Index* s.v. I think Van Raalte is somewhat too cautious in thinking that the rendering 'though' is based on the relation between the content of the two sentences, rather than on the value of the conjunction by itself. The conjunction, I take it, has its usual value ('since'), but is (like γάρ sometimes is; e.g. at 76a2) elliptically used, meaning, in our case, something like: 'since this is clear enough [...], <you could think that *that* is it, but> ... *etc.*'

<sup>222</sup> Cf. *GA* II 6, 742b25-29.

The other note (76a26-30) uncommonly draws the reader's attention to what we call 'subjective certainty'.<sup>223</sup> In keeping with his earlier remark at 75b39-40, Aristotle warns us that it is difficult to be certain whether one has cognition (οἶδεν) or has not, because we cannot be sure that, when neatly exhibiting something from true and immediate starting-points, the immediate starting-points are really the ones commensurate to the attribute in question.

### 6. 36 *The starting-points (ἀρχαί)*

There is much confusion among the commentators about the logical status of what Aristotle labels the ἀρχαί of epistemoni proof. The common translation 'principles' is systematically misleading because of its propositional (statemental) connotation. We should instead retain the ambivalence of the Greek term by rendering it 'starting-points', leaving open for the time being their precise semantic status, viz. either 'primary term or concept' or 'primary or ultimate theorem'.

As early as the opening chapter of *APo.*, Aristotle made clear that in each epistemoni proof we must already be aware of things. It is noticeable that this awareness and initial clarity happen in two different ways (which may occur at the same time, for that matter):

*APo.* I 1, 71a11-17: The required previous awareness occurs in two shapes: (a) of some things it is necessary to assume (προϋπολαμβάνειν) that they are, (b) of some one must grasp what that which is said is, (c) and of others both. For example, (a) of the rule that everything is either affirmed or denied truly, one must be aware that it holds; (b) of 'triangle' that it signifies *this* (τοδί); and (c) of 'unit' both, viz. both what it signifies and that it applies. <These are different fashions, indeed>, for each of these are not clear to us all in the same manner.

Aristotle seems to recognize the difference between pre-existent awareness of (a) dictums and of (b) expressions (including single terms and more-than-one-word expressions). While the objects of the awareness are different, the awareness itself, I take it, is of the same nature, viz. 'being aware that something (*p* or [*x*]) obtains or applies'.

This twofold awareness spoken of in the opening chapter is what chapters 10 and 11 are all about. Aristotle first broadly defines the

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<sup>223</sup> Mignucci (1981), 184; Detel (1993), 210.

notion of ἀρχή, and goes on to explain in what sense starting-points are assumed:

*Ibid.* 10, 76a31-36: I call 'starting-points' in each genus that which<sup>224</sup> cannot be shown (δειξαι) to obtain. Now, as for the question what things *signify* [our (b)], both the primary expressions (τὰ πρῶτα) and what follows from them are assumed. But (a) that they apply must be assumed as the starting-points, and be shown for the rest. For example, we must assume (b) what 'being a unit' or 'being a straight line' and 'being a triangle' signify, and (a) that 'being a unit' and 'being a magnitude' (like straight line and triangle) apply; but the rest we must show (δεικνύναι).

Evidently, these examples from arithmetic and geometry are to instance the simultaneous occurrence of (b) and (a). That is to say, we must assume *both* the meaning of 'straight line' or 'triangle' *and* that they apply in the situation at hand, while, as far as what follows from these notions as primarily applying is concerned, these attributes must be shown to obtain. For instance, when this particular tympanum is called up by the disputant as 'triangle', the fellow-disputant must ((b) *plus* (a)) assume *both* what 'triangle' refers to *and* its applicability, i.e. that the tympanum is truly brought up as 'what is a triangle'. While any sequel from 'the tympanum being a triangle' (like the property of 'being 2R') must be proved by his colleague, the opponent has simply to recognize in advance that the tympanum under examination is triangular, so that the appellation 'triangle' is truly applied.

Thus the ὅτι ἔστι device (76a33), which is standardly (but erroneously) explained in general terms of 'existence',<sup>225</sup> merely bears on the applicability of certain appellations of the object which are suitable to accomplishing the proof. Surely Aristotle is not speaking of oddities such as, for instance, "geometry assumes that there exist such things as lines".<sup>226</sup> Detel (217) rightly wonders what could be

<sup>224</sup> The feminine ταύτας ἄς at 76a31 is due to attraction; 'those facts' (Tredennick) or 'ces vérités' are misleading as limiting them to 'statemental' starting-points (complete dictums or *that*-clauses). Instead, Aristotle refers to all kinds of claiming 'this is the case', 'this applies' which cannot be proved. It is in this line of thought that 'definitions' (rather 'identifications') are said to be unprovable; see below re *APo.* II 8-10 my section 6.5.

<sup>225</sup> Ross, 538ff.; Barnes, 135ff.; Detel II, 216ff.

<sup>226</sup> Barnes, 135; 1994, 139 *juncto* 184f.; 1994, 203, and *passim*. Cleary too seems to regard (1995, 179; 332) the ὅτι ἔστιν device as concerning "positing that there are such things as *F*'s", instead of merely stating that [*x*] is actually an instance of *F*ness. Following a suggestion made by Gomez-Lobo (1980), he claims (184) that the εἰ ἔστιν question is about the mode of being of subjects, whereas the ὅτι ἔστι issue

the significance of arguing for the existence of such things as lines or thunder in general, but fails to abandon the idea that Aristotle has general arguments of existence in mind, as though the investigator were obliged to assume that the classes of 'line', 'triangle', 'thunder', and so on are not empty. The *ὅτι ἔστι* device is all about identifying an existing particular object as actually being an instance of such-and-such a thing indicated by a certain definiens.

In the subsequent lines (76a37-41), Aristotle goes on to differentiate the starting-points (including special and common ones) as they are used by various disciplines. Quite understandably, he is now talking about statemental starting-points ('theorems'), including both definitorial ones — i.e. complete dictums, like logical laws or theorems, or incomplete dictums, such as definientia — determining the technical meanings of words like 'line', and basic theorems, such as 'if equals are subtracted from equals, the remainders are equal'. The definitorial dictum 'that a line is a such-and-such thing' (a40) is a special (geometrical) starting-point, while the subtraction rule is common to various disciplines (a41).

Next the author presents some hints (76b2-11) about how epistemonically proofs in arithmetic and geometry proceed. Both geometers and arithmeticians assume<sup>227</sup> common principles (such as e.g. 'When equals are subtracted from equals the remainders are equal') to their proper discipline, but only apply them to magnitudes and numbers, respectively. Likewise the proper subjects of each discipline act as their starting-points, e.g. units, points and lines. Arithmetic and geometry posit these (see above item (a)) to apply, and ((b)) to be such-and-such. And as far as their essential attributes are concerned, they ((b)) posit what each signifies — e.g. arithmetic does so with 'odd', 'even' etc., and geometry with 'irrational', 'inflection', or 'verging' — but as for these attributes really being the case, they prove them through the common starting-points and from what has already been proved epistemonically. And astronomy proceeds in the same way.

This leads Aristotle to a general assessment of starting-points in the theory of knowledge:

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is about the mode of being of predicates. As I take it, 'to define [*x*]' = 'to identify [*x*] as satisfying a certain definiens', i.e. stating that [*x*] is an instance of *F*-ness, no matter the syntactical position the term indicating [*x*] has; see my sections 6.53-6.59.

<sup>227</sup> Properly speaking, disciplines do not assume things, but rather posit or postulate them.

*Ibid.* 10, 76b11-16: For every apodeictic discipline has to do with three elements: (1) what is posited to be (ὅσα τε εἶναι τίθεται) — this is the genus of which it studies the essential attributes; and (2) what is called the common starting-points, i.e. the primary things from which it initiates the proof; and (3) the attributes of which it assumes what each signifies.

The first element is not just the object under examination, say, the tympanum of a certain edifice; but this object as brought up under the generic appellation suitable to the specific way of examining proper to a discipline, that is to say, an appellation which (or whose sequel) may serve as the commensurate counterpart to the attribute one is to prove of the object. The above description of this element bears on each discipline's task of positing a certain appellation for the object (say, 'mathematical figure' or 'triangle' for our tympanum), and, in a disputation, demanding the opponent's agreement to its being truly applied to that object. Thus this element has to do with the fulfilment (or preparing the observance) of the καθ' αὐτό and καθ' ὅλου requirements.

The second component more specifically concerns the basic means of arguing, including both primary terms, definientia (or 'more than one-word terms'), and common rules (including inference rules). The third one is about assuming (or positing) the meaning of the attribute term, prior to any proof.

In the next lines (76b16-22) Aristotle recognizes that these components do not always demand three explicit steps in the process of argument, because things are sometimes clear enough, e.g. that a 'thing' [*x*] may be called a number ('countable aggregate') goes without saying, as is the meaning of the expression 'to subtract equals from equals'. None the less, the above three components in principle ('by nature', Aristotle says) belong to each and every proof.

After some remarks (76b23-34) about 'starting-points', 'suppositions', and 'postulates', Aristotle goes on (76b35-77a4) to assess the precise nature of 'definientia' (ὅροι). They are contrasted with suppositions. While the latter are to be consented to as being true, definientia do not express that something is the case, and, therefore, should only be grasped by grasping their components. Thus the definiens of, say, 'unit', which runs (72a22-23) 'that which is quantitatively indivisible', must not be consented to — no more than the term it is to explain, for that matter — but its meaning should be understood. Incidentally, unlike the definiens (ὅρος), the definition (ὁρισμός), running 'the unit is what is quantitatively indivisible', is a

supposition, which is to be affirmed or rejected. Interestingly enough, Aristotle leaves open the (undesirable) possibility<sup>228</sup> that someone should put these two on a par, by saying that to adopt (ἀκούειν)<sup>229</sup> a definiens comes to understanding it as a supposition.

There is also a brief remark (76b39-77a4) on the use of mathematical drawings. In fact, though, e.g., a line or triangle drawn in the sand (or on any other material) cannot be identified as a genuine mathematical figure of the kind, you must not say that the geometrician is using a falsehood when he calls these drawn things a line or a triangle, or when he says that this line is a foot long or a straight line, since he reasons from what they are supposed to represent ("from what is made clear (δηλούμενον) through them", Aristotle says), not from the perceptible things actually drawn. In *Met.* B 2, this phenomenon is put in the broader context of the representativity of the means adhibited by the diverse disciplines:

*Met.* B 2, 997b32-998a6: It is not even true that geodesy is concerned with perceptible and destructible magnitudes; for it would be destroyed if these are destroyed. Nor is astronomy concerned with perceptible magnitudes or with *this* heaven. For neither are perceptible lines such as the geometrician speaks of (for no perceptible thing is straight or curved in the sense in which he uses the terms 'straight' and 'curved; for the <perceptible> circle touches the tangent not at a point, but in the manner in which Protagoras used to say in refutation of the geometricians). Nor are the motions and orbits of the heavenly bodies like those which astronomy discusses, nor do <the astronomer's> symbols have the same nature as the stars.

The remark found in *APo.* is bound to remind the reader of Plato's exposition in *Rep.* VI, 510C-E, where he is arguing that the geometricians make use of perceptible forms and talk about them, though they are not thinking of them but of the entities these images are a likeness of, pursuing their inquiry for the sake of the square as such and the diagonal as such, not for the sake of the images of them which they draw.

To Plato, however, the real objects of geometry are the transcendent Forms, Square and Diagonal. That is why Aristotle cannot go the

<sup>228</sup> There are other occurrences of Aristotle suggesting things which are deliberately absurd (e.g. *APo.* I 7, 75b5; I 31, 88a10; *Top.* II 1, 109a32; *Met.* Γ 4, 1006b20; M 4, 1079a2).

<sup>229</sup> For ἀκούειν in the sense of 'taking in such-and-such a way,' cf. I 24, 85b22 ("it is not due to the proof itself, but to to the listener <who takes the terms in the wrong senses>". By ignoring the difference between 'definiens' and 'definition', as well as the meaning of ἀκούειν at 76b38, Barnes (136f.) and Detel (I, 31; II, 219; 224) wrongly argue for the rendering 'term'.

whole way with his Master. We should not be surprised, therefore, when we read in the first section of the next chapter how Aristotle dispenses with subsistent Universals of Platonic flavour.<sup>230</sup> Such Entities are superfluously postulated. The only thing needed for epistemonik proof is appellations which are universally applicable to things of an akin nature.<sup>231</sup>

Chapter 11 is about the starting-points common to all disciplines, particularly the Law of Non-Contradiction (LNC) and that of Excluded Middle (LEM). It must strike the reader that the use of both laws is primarily exemplified in terms of naming ('appellation'), not statemental predication.

In keeping with what was observed earlier (76b16-21), Aristotle (77a10-15) says that no proof takes up LNC as an explicit step of the argument (supply, 'because of its familiarity'), unless it is required to prove the conclusion in this manner, too, viz. if the proof requires for a premiss both that the assertion that the major term is said of the middle is true and that the denial is false; it makes no difference if you continue the proof from the affirmative middle being affirmed or the negative middle being denied, and likewise for the third term. This is illustrated, thus:

*Ibid.* 11, 77a15-21: For if something is conceded (ἐδόθη)<sup>232</sup> of which it is true to say 'man' (even though it also holds of not-man), but provided that it is only conceded<sup>233</sup> that a man is an animal and not a not-animal, it will be true to say that Callias, even if he were not Callias, is none the less an animal and not a not-animal.

Before embarking on this difficult passage, a general remark on the way axioms function in the epistemonik procedure may be useful. It is commonly overlooked by the commentators (Ross, Barnes, Detel *ad loc.*) that Aristotle here only speaks about an extra step in the argument which is sometimes explicitly inserted, owing to the opponent's obstinate behaviour. Normally this step is superfluous, because it concerns the operation of, say, a logical law or theorem which is tacitly *in confesso* among the disputants. Barnes's comment (104) that

<sup>230</sup> Barnes (*ad loc.*) rightly remarks that the opening section of ch. 11 felicitously follows the Platonic issues canvassed at the end of ch. 10.

<sup>231</sup> Barnes, 139f.; (1994) 144ff.; McKirahan (1992), 78f.; Detel II, 239-41; 246-8.

<sup>232</sup> This verb refers here, I take it, to the respondent's bringing up the προκείμενον in question under a certain appellation (e.g. 'animal') which as such admits of two opposite determinations (both 'human' and 'non-human').

<sup>233</sup> The εἰ at 77a16 continues the first εἰ of a15, not the other one, as is commonly assumed. Therefore one should supply ἐδόθη, not ἀληθὲς εἰπεῖν.

“Aristotle is clear that principles function as premisses of demonstrations (72a7); but it is not easy to see how they can do so” is, I take it, beside the mark in several respects. A typical axiom, he argues, is the Law of Excluded Middle (LEM), which cannot be expressed in a syllogistic form. From 77a10-12 it is patently clear that no epistemonik proof (οὐδεμία ἀπόδειξις) comprises (λαμβάνει) LEM, save in exceptional circumstances. But in such cases, there is still no proof proper, but merely an application of LEM in the framework of *exhibiting* (77a12: δεῖξαι) the conclusion. From the passage just quoted it is clear that starting-points, even if they are in fact propositional, need not function in the epistemonik procedure as explicit premisses; it suffices that they govern the process, their ‘truth’ being *in confesso* among the disputants.

Likewise any occurrence of suppositions in syllogistic form is out of the question. Barnes’s line of reasoning that “if suppositions are existential propositions, then they too are not syllogistic” cuts no ice either, because they are not existential propositions to feature as premisses of the apodeixis, but positions which could serve as the conclusion of an epistemonik proof if only they were not ‘immediate’, i.e. not susceptible to a middle.<sup>234</sup> Finally, the function of the definition, the protagonist among the starting-points, is such as to lie equally beyond the proper domain of the epistemonik procedure. As will be shown later (my section 6.57), the nominal definition even precedes its preparatory stage, whereas its counterpart, the ‘real’ definition, merely serves as a thing’s identification in the preparatory stage of the proof. Therefore Barnes’s remark (*ibid.*) that “definitions might well seem wholly unamenable to syllogistic expression”, however correct in itself, cannot be adduced to demonstrate that the role of defining is problematic.<sup>235</sup>

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<sup>234</sup> Clearly, ‘supposition’ as used in Aristotle’s other works has an additional connotation of being a questionable position (to say the least), which is reputable merely because of the repute of the philosopher who launched it (e.g. Heraclitus or Anaxagoras).

<sup>235</sup> Incidentally, Barnes (104; 1994, 101) is wrong in thinking that Aristotle explicitly says that definitions have subject-predicate form; see also my note 156 in section 6.33. At *APo.* II 3, 90b3-4 it is only claimed that “definition is generally held to bear on a thing’s quiddity”, and rightly so, since the definiens (not the definition, properly speaking) conveys a thing’s quiddity; but this should be understood in terms of quidditative appellation, which is critical for bringing up a substrate and an attribute in a fashion appropriate to apodeixis. This view of definition is confirmed in *Top.* VII 3, 153a15ff., where it is patently clear that Aristotle equally speaks of the definiens and its quidditative ingredients, so that any idea of a statemental structure is out of the question.



Returning now to our text, it is highly compressed. What Aristotle has in mind, I take it, is something like this. If one is to prove, say, that a certain entity (in fact, Callias) is sensitive, and the opponent has conceded that it is an animal, but tries to escape the conclusion that 'being sensitive' *commensurately* applies to 'animal' (and consequently will apply to Callias), by objecting that 'animal' applies to 'not-man', too, and only agrees that the entity under investigation is an animal, the respondent can truly maintain that this entity, even if it were not Callias (but Callikles or Socrates, or even an animal which is not a man), is nevertheless an animal and, by implication from LNC, is not a not-animal, so that the commensurate way in which 'being sensitive' falls to the substrate is not jeopardized. Thus the only thing the respondent has to do is to make the (unusual) additional step in which, by applying LNC, he makes clear that, regardless of the further identification of the substrate,<sup>236</sup> the present object is an animal, and, therefore, not a not-animal. And this will make the opponent's remark that 'animal' also applies to 'not-man', however true in itself, entirely irrelevant. Aristotle can, then, go on to explain:

*Ibid.* 11, 77a18-21: The explanation is that the major term [e.g. 'being sensitive'] is said not only of the mediating 'being an animal' [as referring to our substrate, Callias], but of something else as well [viz. a different animal], because it holds of several instances <of 'animal'>. Hence even if the middle applies both to our substrate and to what is different from it, this makes no difference with regard to the conclusion.

There is still another case in which a chief law is assumed, to wit LEM in case of a proof 'ad impossibile', that is to say, in so far as it is adequate (ἰκανόν), with regard to the pivotal point of any proof, viz. the generic appellation by which the object is brought up (77a22-25).

The final part of the chapter (77a26-35) discusses the role which the common starting-points and requisites have in each discipline, and in dialectic in particular. In fact, common theorems are brought up, like LEM, and the aforementioned detraction rule.<sup>237</sup>

Chapter 12 deals with the problem of how to find the epistemonik type of question from which the conclusions proper to each discipline

<sup>236</sup> This remark should be seen, I take it, in connection with Aristotle's claims at Π 19, 100a16-b1, that although it is the particular that is perceived — and brought up qua *this* or *that* particular, we may supply — the perception of, say, Callias's manhood concerns what is universally common to other particulars of the kind, e.g. 'man', not 'Callias, the man'.

<sup>237</sup> Barnes 142f.; Detel II, 251-7.

can be framed, in order to accomplish a genuine proof pivoting upon the proper generic appellation. Among other things, a special difficulty concerning problem analysis<sup>238</sup> is briefly discussed (78a26-35) which is due to the fact that it is possible to infer a true conclusion from false premisses, so that there is no reciprocity between the premisses and the conclusion with regard to truth.

### 6. 37 *Knowledge of the 'fact that' and knowledge of the 'why'*

In chapter 13 Aristotle goes on to distinguish between truly knowing the fact that something is the case through its explanation, i.e. by knowing 'because of what'<sup>239</sup> it is the case, and being familiar with a fact that, not through such an explanation.<sup>240</sup> The main division of the chapter is into 78a22-b34 (introduced by *πρῶτον*) and 78b34-79a19 (introduced by *ἄλλον δὲ τρόπον*, used here instead of the usual *ἔπειτα*).

The first part of the chapter concerns this important difference, in cases in which one single discipline is concerned. In such cases two ways in which there is knowledge merely of 'the fact that' should be distinguished: (a) if the deduction does not proceed from immediate premisses: for, then, the primitive cause is not taken up, whereas genuine knowledge of the cause or reason *why* is to be achieved along the lines of the primitive cause; (b) if it does proceed from immediate premisses, but not through the causal explanation but through exploiting the more familiar of two convertible terms, e.g. the effect instead of the cause: for nothing prevents the non-explanatory one of two mutually applicable terms from being more familiar than the other.

The second case (b) is instanced thus (78a30-b4). Supposing, the planets are proved to be near *because* they do not twinkle, there is real knowledge produced of the fact that they are near, not through its cause, however, but reasoning from the effect of the real cause; for it is not because the planets do not twinkle that they are near but the

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<sup>238</sup> By this 'making an analysis' ἀναλύειν (78a7-8) the discovery of the appropriate generic appellation, which is the pivot of the epistemonical proof, should be understood.

<sup>239</sup> Ackrill (1981, 360, n. 2) aptly remarks that Aristotle's 'doctrine of the four causes' might better be called his doctrine of the four 'because's', since neither 'cause' nor 'explanation' is an exact equivalent of αἷτια.

<sup>240</sup> Barnes, 149; (1994), 155.

other way round. The difference has everything to do with the choice of the appropriate middle.<sup>241</sup>

The difference between mere fact and reasoned fact may also feature when they are studied by different disciplines, that is, when one discipline is subordinate to another, like optics to plane geometry, mechanics to solid geometry, harmonics to arithmetic.

In chapter 14 it is claimed that, since genuine epistemonik proof is all about the choice and optimal use of the proper middle, the first syllogistic figure is most appropriate to it. The main reason is that it is only in this figure that the quiddity of things can be adequately proved, and to grasp a thing's quiddity is pivotal to choosing the appropriate middle having the required commensurateness to the attribute under examination.

#### 6. 38 *No genuine knowledge without sense-perception*

In the context of his discussion of ignorance and false belief (I, chs. 16-18), Aristotle discusses the important issue of the indispensability of sense-perception. It is true that epistemonik proof proceeds from universal knowledge and induction merely from particulars. But it is impossible, Aristotle claims, to study universals without sense-perception:

*APo.* I 18, 81a38-b9: It is also plain that if sense-perception is wanting, some knowledge must also be wanting — knowledge which it is impossible to acquire, given that we learn either by induction or by epistemonik proof (the latter proceeding from what is universal, and the former from what is particular). But it is impossible to gain a view of universals except through induction — since for that which is brought up in abstractive<sup>242</sup> terms it holds good that one will also have to make their applying clear, viz. that some attributes fall to each of the genera singled out (although they have no separate existence), in so far as each is such-and-such a particular — and it is impossible to accomplish an induction without having sense-perception, because it is sense-perception that apprehends particulars. It is indeed not possible to get knowledge of them just as they are (αὐτῶν),<sup>243</sup> neither from universals without induction nor through induction without sense-perception.

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<sup>241</sup> Pace Ebert (1977, 129), who seems to have some doubt about the stringency of Aristotle's claim. This claim formally follows from the specific role Aristotle ascribes to the epistemonik middle.

<sup>242</sup> I.e. detached ('singled out') from the object's material constitution.

<sup>243</sup> Taking αὐτῶν pregnantly ('of them themselves').

In I, 31 and II, 19 this general thesis will be discussed in some more detail.

6. 39 *An infinite chain of premisses rejected. The nature of categorization*

In chapters 19-23 there is a continuing argument for the thesis that deductive chains of infinite length are impossible; and, accordingly, so are infinite chains of premisses in epistemonik proof. In ch. 19 this thesis is stated, and the question whether it is true is divided into three sub-questions (which are discussed in chs. 20-22, with certain corollaries in ch. 23): (1) Can there be an infinite chain of attributes ascending from a certain substrate? (2) Can there be an infinite chain of substrates ('substrate appellations') descending from a given attribute? (3) Can there be an infinite number of middles between a given attribute and a given substrate?

Unlike in dialectical arguments, we must, in questions about the truth of states of affairs (πρὸς δ' ἀλήθειαν), inquire on the basis of what actually is the case (ἐκ τῶν ὑπαρχόντων). It appears from the subsequent lines that Aristotle intends to say that we must argue from terms that signify the object (substrate) in question in virtue of its own quiddity, not referring to it after one of its coincidental modes of being. Now, Aristotle claims, any substrate can be brought up by means of such *per se* (καθ' αὐτό) appellations (viz. the specific and generic appellations, including the differentiae, of the column of the first category). He once again gives an example of what he means by 'coincidental appellation':

*APo.* I 19, 81b25-29: I mean by <bringing things up> coincidentally: we sometimes say that that white thing over there is a man, not using the same manner of expression as when we say 'the man is a white thing'; for <unlike the latter case> he is not, while being something different <of his own, viz. 'man'>, white as well, whereas <the expression> 'the white' <thing> means that being white coincidentally has fallen to the man.

As so often, Aristotle's terse manner of speaking is elliptical. What he has in mind is this: We may speak of a human being who is white, by saying either 'that white thing over there is a man' or 'the man is white'. In the latter case we bring the subject up using a *per se* name, while in the former case we refer to it under a name conveying a coincidental mode of being, which implies that, of its own, the subject-substrate is something different from 'just a white thing'.<sup>244</sup>

<sup>244</sup> I 22, 83a1-14, in particular. Notice that this semantic procedure is applied by

In chapter 22 it is shown that the first two questions of ch. 19 must be answered in the negative (which implies that the third one too must be so answered).<sup>245</sup> For our present purpose only Aristotle's digressions (83a1-35 and b17-31) on what he means by 'quidditative naming and predication' (ἐν τῷ τί ἐστὶ κατηγορεῖν) are of interest.

In 82b37-83a24 the issue of quidditative appellation and predication comes up for discussion in the framework of the question about the infinite chain of appellations. Aristotle claims (82b37-83a1) that there must be a limit, since, given that it is possible to define a thing and to be familiar with its quiddity, and that one cannot go through an infinite number of things, the quidditative appellations must be limited in number. The author proposes to argue the issue generally, as follows. One can say truly 'that the white thing is walking', and 'that that large thing over there is a log'; and again 'that the log is large', and 'that the man is walking'. Fully in keeping with the previous discussion of 81b23-29, we are warned that these dictums ('assertibles') are quite different:

*Ibid.* I 22, 83a4-14: For when of that which is white I say (φῶ) that it is a log, then I mean to say (λέγω)<sup>246</sup> that that which is coincidentally white is a log, but not that the white thing is the underlying substrate for the log; for in fact (καὶ γάρ) it is not the case that being white or precisely being some white thing (ὅπερ λευκόν τι),<sup>247</sup> it came to be a log, whence it is now only coincidentally a log. On the other hand, when of the log I say that it is white, <I do> not <mean> that what is something different <of its own> is white (ὅτι ἕτερόν τί ἐστὶ λευκόν)<sup>248</sup> and that that coincidentally is a log — in a similar manner as when saying of what is educated that it is white; for then I mean to say of the man who is coincidentally educated that he is white —. Rather <what I mean to say is>: the log is the underlying substrate (τὸ ὑποκείμενον) which *did* come to be <white>, not in virtue of its being something different from just what it is to be a log, or, at least, a particular log.

Next Aristotle goes on to put this same idea in general terms, by diversifying the kernal device κατηγορεῖν. It is patently clear that this

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Aristotle throughout his works to solve intricate problems in which the precise way of naming is crucial to their solution.

<sup>245</sup> For these discussions see Ross, 567-83; Barnes, 161-73; (1994), 169-81; Detel II, 353-400.

<sup>246</sup> Note the difference between φάναι and λέγειν: the first dictum is actually uttered, while the other two are what is (not) meant by the first one. Tricot rightly renders λέγω "j'entends alors".

<sup>247</sup> Ross's (581) "identical with a species of white" is entirely beside the point.

<sup>248</sup> Note the occurrence of one of the key phrases ('being (or not being) something formally different') used in cases of focalization.

verb is used to stand for naming or appellation ('categorization'), rather than sentence predication, as it has always been taken to mean. What Aristotle has in mind is that if I designate a certain entity, which in fact is a man or a log, as 'white thing', such an appellation is, so to speak, insignificant, because it fails to indicate the thing in question as it is in itself. When I call [x] 'white thing', the hearer will still be wondering about what kind of thing I am referring to, and be inclined to think that I am 'saying nothing':

*Ibid.* I 22, 83a14-23: If we are to lay down a general rule, let speaking in the latter way be 'appellating' (κατηγορεῖν), and that in the former way either not appellating at all, or else not appellating in the unqualified sense (ἀπλῶς) but designating coincidentally (κατὰ συμβεβηκός). Now <in genuine appellation> that which is said is, say, 'the white thing', while that of which it is said is the log. Thus let it be laid down <as a rule> that the appellation should always be said in an unqualified sense of that which it is said of, never coincidentally; for this is the way in which epistemonical arguments prove. Hence whenever something one is said of some one thing, this happens either in the quidditative mode of being, or in the qualitative or quantitative or relational or locative or temporal mode of being or after its doing or undergoing something or its being at some place or time.

Barnes (168; 1994, 176) asks why Aristotle should have thought that 'unnatural predications' are not found in demonstrations, and thinks that at 83a20-21 Aristotle must mean "these are the sort of predications occurring in demonstrations", which leaves the use of 'unnatural predication' in epistemonical proof open. The only answer to his question Barnes could think of (in the first edition) was "a disreputable one: Unnatural predications are incidental, and demonstrative propositions are all non-incidental; this plays on two senses of 'incidental'". In addition, Barnes (168f.) accused Aristotle of confusing substantial with essential predicates.<sup>249</sup> In the revised edition he suggests (176) that perhaps Aristotle had something like the following in mind. If a sentence expresses a *true* non-natural predication, then there will always be an associated sentence which expresses the natural truth which underlies the unnatural predication (thus 'The sculptor, who is musical, made the statue' can be associated with 'The musical man made the statue').

To my mind, by thinking that there is talk of 'predication' here in the sense of sentence predication (whether natural or unnatural) *eo*

<sup>249</sup> The interesting observations made by Detel (II, 380-400) are likewise obscured by his failing to see the semantic role of κατηγορεῖν on this score.

*ipso* producing demonstrative propositions (whether non-incidental or incidental ones, respectively), one is inevitably set on the wrong track. In fact, (1) naming or appellation, not sentence predication, is in place here; and (2) Aristotle is dealing with the initial step of epistemonical proof, viz. the correct categorization of the object of which a certain attribute is to be proved, not the second step of framing the pivotal premiss in which this attribute is commensurately assigned to the object brought up under the appropriate name.

Let me explain. Supposing I intend to prove of a white entity (which is in fact a piece of wood) that it is combustible. Keeping in mind this property of being combustible, I call the white object which my fellow-disputant and I have before us (the *προκειμένον*, as it is called in the *Topics*) ‘this log’. Now I have to justify that by using this appellation I designate the object quidditatively, i.e. after what it precisely is, not after one of its coincidental modes of being. To this end I argue that, when initially calling the object ‘white thing’ we already meant that “that which is coincidentally white is <properly speaking> a log, and not that the white thing is the underlying substrate of the log” (see 83a4-7); in a word, the object is non-coincidentally a log. This being established, the premiss can be framed: ‘this piece of wood is combustible’, thus preparing the pivotal premiss in which the object, ‘white entity’, is indicated by an appellation more precisely expressing its essential property which is commensurate to ‘being combustible’.<sup>250</sup>

On this interpretation, the enumeration of the non-substantial categorial modes of being presents no problem at all. One should be aware in the first place that the core of appellation in the unqualified sense (which was later called ‘natural’)<sup>251</sup> is to warrant the correct identification of the object under discussion; and this implies that the name imposed on the object should grasp it in its being an underlying substrate of properties of whatever kind, both quidditative and non-quidditative. Secondly, the feature of being an underlying substrate does not necessarily entail physical independency; the capability of underlying other properties will suffice, as, for instance, triangularity underlies the property of being 2R.<sup>252</sup> Thus nothing

<sup>250</sup> The proper means of accomplishing this is to define ‘wood’ and ‘combustibility’, in order to find in these two definitientia the matching point, and to give it a name if it is anonymous.

<sup>251</sup> Philoponus CAG XIII-3, p. 235<sup>17</sup>ff. (κατὰ φύσιν).

<sup>252</sup> Pace Barnes (168; 1994, 176), who thinks that “indeed, in Aristotle’s view, any proposition of the form *YaG* — where *G* is any geometrical term, e.g. ‘triangle’

prevents us from naming our object after its quantitative, qualitative, relational etc. being, provided that the attribute under examination commensurately applies to one of its non-substantial modes of being. For example, when the property of possessing paternal love is under discussion, Callias ought to be called up not as 'human being', but by the non-substantial, relational name 'father', since it is his fatherhood that underlies his nursing paternal love. Thus for arriving at correct categorizations, the ten categories are all in the running.

This train of thought is continued in the next part of the digression on κατηγορεῖν, in which the implications of the previous argument are drawn out.<sup>253</sup> The phrase οὐσίαν σημαίνειν is opposed to κατ' ἄλλου ὑποκειμένου λέγεσθαι, and this opposition makes clear that the former device means something like 'to bring up a thing as self-contained', i.e. not qua being said of something else which is to act as its underlying substrate. The purport of this paragraph, I take it, is this:

(1) 83a24-25: Appellations that convey self-containedness signify that which they are said of as quidditatively *this* or *that* or an instance of *this* or *that* (ὅπερ ἐκεῖνο ἢ ὅπερ ἐκεῖνό τι).<sup>254</sup>

(2) 83a25-30: Appellations that do not convey self-containedness, but are said of some underlying other thing which itself is quidditatively *not* that which they signify, nor indicate an instance of it, are coincidental. In this manner, 'the white <thing>' is said of man. Indeed, if a man is called 'white thing' the appellation 'white', by implication,<sup>255</sup> indicates that whiteness is not something self-contained, but is said of something else, namely man, which is quidditatively *not* that which is signified by '(instance of) whiteness'; for the man in question is neither just what is white nor just an instance of whiteness, but presumably (ἴσως) an animal, because a man is quidditatively an animal.

(3) 83a30-32: Things designated by appellations that do not convey self-containedness, must be brought up as said of something acting as their substrate. There cannot be anything white which is white without being something different.

The last remark is accompanied (83a32-35) with a sneer directed at Plato's doctrine of the Forms, according to which there is some-

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— will be unnatural; for triangles are not independent entities".

<sup>253</sup> In fact, the sketch of the situation, which was started at 83a17 (ἔστι δ') is continued at a24 and a36 (Ἔτι = 'Again').

<sup>254</sup> Cf. the use of ἐκεῖνον in *Met.* Z 7, 1033a7 and Θ 7, 1049a19-21.

<sup>255</sup> Notice that the make-weight '<thing>' is not found in Greek, but is merely included in the use of the neuter substantivated adjective.



thing like the Form of Whiteness, which precisely is Whiteness without being something else. Platonic Forms cannot be adduced to reject Aristotle's semantic position: "For we can say goodbye to the Forms; for they are mere humming (τεπετίσματα)<sup>256</sup>; and supposing that there are any, they are nothing to the argument, because epistemonik proofs are about things of the sort we have described".<sup>257</sup>

In the next few lines (83a36-b17) the previous exposition is adhibited to show that appellations that convey self-containedness and those that do not cannot reciprocate, so that you will always land in the categorial column of the underlying things ('Substance'). Now the steps involved do not form an infinite chain, since they concern a finite number of species and genera ending in one of the ten genera generalissima. For example, if you bring up some object as 'the white' <thing> any analysis will end in either the genus generalissimum, Substance, or Quality, depending on the different way of focalization. That is to say, if, with a view to the attribute 'sensitive', you are focussing on a feature of the object that is commensurate with 'being sensitive' and, accordingly, go on to identify it as 'animal', your analysis will end as early as that; if the intended attribute is, say, 'being heavy' or the property of physical existence, the terminus will be the genus, Body, or the genus generalissimum, Substance, respectively. If, on the other hand, when indicating e.g. a white stone by the phrase τὸ λευκόν, the intended attribute is 'sparkling', you will have to focus not on the substantial column (by bringing it up as a stone or any other bodily thing), but that of Quality (identifying it as 'something white'), and take its whiteness precisely as the entity underlying its 'being some sparkling thing'. Referring back, now, to the opening lines of the present chapter (82b37-83a1), Aristotle (83b1-10) claims that the appellations cannot proceed to infinity either upwards or downwards.<sup>258</sup> This is first made manifest for the first category column:

*Ibid.* 22, 83b1-7: Either the object will be brought up in its substantial mode of being (ὡς οὐσία), such as in that of a genus or a differentia

<sup>256</sup> The verb τεπετίζειν is used to stand for producing sounds by singing without uttering (significant) words ('tralala') at *Problem.* XIX 10, 918a30.

<sup>257</sup> The argument nicely parallels *EN* I 6, 1096a34-b5 *juncto* b32-1097a14. (Barnes, 169; 1994, 177).

<sup>258</sup> Just as the upward chain is bound to finish in the corresponding genus generalissimum, so the downward one will necessarily finish in the domain of individuals.

of the thing appellated. Well, it has been shown that these appellations will not be infinitely many, either downwards or upwards — e.g. calling <in the upwards line> a man ‘a biped’, and this again ‘an animal’, and this again something else [like body etc.]; nor saying ‘animal’ of a man, and ‘man’ of Callias, and Callias of something else, still in the quidditative line (ἐν τῷ τί ἐστίν). — For every subsistent thing of this sort can be defined, but one cannot go through infinitely many things in thought.

Subsequently, the same is shown (83b10-17) for the non-substantial columns. It is claimed that things can be brought up after a non-substantial mode of being, but only coincidentally, i.e. not grasping them in virtue of their proper being. And it will always be the case that the chain in the upward direction ultimately ends somewhere in the substantial column, “for all these appellations coincidentally apply and are <ultimately> said of subsistent things” (83b11-12).

The recapitulation of the foregoing exposition leads to three more pertinent arguments, two dialectical (83b24-84a6), one analytical (84a11-b1), in support of the thesis that the possible appellations are finite in number, both in the upward and the downward directions. I shall confine myself to the analytical proof.

Epistemoni proof is about what belongs to things *per se* (καθ’ αὐτά), that is, *either* (a) in virtue of their own quiddity, *or* (b) in virtue of the quiddity of what is signified by these ‘belongings’. Now neither of these types of *per se* appellation can be part of an infinite chain, either in the upward or the downward direction, because it is impossible for an infinite number of appellations to all belong *per se* to something else, since this would imply an infinity of converse quidditative relationships between them.<sup>259</sup> This is proved for both the (b) and the (a) cases:

*Ibid.* 22, 84a17-26: It is not possible for either of these *per se* appellations to be infinitely many. Not, indeed, (b) such as ‘odd’ is said of number; for then again ‘odd’ would have another *per se* attribute in which ‘odd’ would be *per se* inherent; and if this is primitive, number will be inherent in what *per se* holds of it. Thus if it is not possible for infinitely many appellations to be inherent in a single substrate, they will not be infinitely many in the upward direction, but everything must hold of number as the primitive thing, and number of them, so that they will be convertible with number and not exceed it. Nor again (a) can the appellations belonging themselves in the quiddity of their substrate be infinitely many; for then it would be impossible to define it.

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<sup>259</sup> Cf. Philoponus CAG XIII-3 *ad loc.*

This leads to the conclusion (84a26-30) that both the *per se* appellations leading upwards and those leading downwards must come to a halt, and this implies that the number of intermediate terms will be finite, too.

The final outcome is that not everything can be proved, and there are immediate starting-points ( $\alpha\rho\chi\alpha\varsigma$ ), which are in fact the very points where the upward chain comes to a halt. This paragraph contains an interesting remark (84a36-37) on the nature of the epistemonik procedure: "It is by a thing's definiens being inserted, not by introducing a definiens of something external that that which we are going to prove is actually proved". In fact, any epistemonik proof precisely consists in conceptually analysing the substrate under examination and the intended attribute by a meticulous procedure of focalization and categorization, in order to identify the object in such a way as to make it commensurately susceptible to the attribute.

In chapter 23 some corollaries are inferred concerning the epistemonik procedure.<sup>260</sup>

#### 6. 4 *What proofs are preferable?*

Since epistemonik proof may proceed from either universal or particular premisses, and either affirmative or negative ones, the question may arise which type of proof we should prefer. A similar question bears on how to assess the proof *ad impossibile*.

##### 6. 41 *Universal proof is superior to one concerning an individual case*

There seem to be good reasons to think that a particular proof is more informative than a universal one, because, when knowing of an individual entity, say Coriscus, that it has a certain attribute, say 'being educated', we are better informed about it than when knowing that this attribute belongs to 'a man'. For in the case of universal knowledge we come to know not that a certain particular possesses the attribute in question, but that 'something else', viz. the object called up by a more universal (specific or generic) appellation, has the attribute. The favourite example is alluded to: the individual isosceles is proved to have a certain property (e.g. 'being 2R') not

<sup>260</sup> Ross, 583f.; Barnes, 173-5; (1994), 181-3; Detel II, 401-12.

because it is this isosceles, but in virtue of its more generic mode of being a triangle (ch. 24, 85a20-31).

What Aristotle has in mind, I take it, is that the universal proof, as it were, tends to ignore the individuality of the object, by addressing it at a somewhat higher level of being, e.g. by taking Coriscus not in his being *this* educated individual, and the mathematical figure not in its being *this* isosceles here. Along this line of approach, the particular proof seems to be more on the mark. Note that the phrase κατὰ μέρος is not a quantification device referring to some partial proposition ('some [*x*] is etc.'), but qualifies the proof as a whole qua bearing on an individual thing.

Another consideration (85a31-b3) pointing in the same direction is based upon the anti-Platonic position that the only things there are are individual beings (τὰ καθ' ἑκάστα). In fact, as it is built on universal being, epistemonik proof creates the impression that there is, for example, such a thing as the 'universal triangle' existing apart from the various instances of 'triangle'. Now in this respect, too, the individual-bound proof seems to be more to the point than the universal one.

To rebuke such misunderstandings is of utmost importance for Aristotle's philosophic stand. Therefore he must make every effort to expose them. First (85b4-7), given that the property of being 2R falls to the figure, not in virtue of its being *this* isosceles, but because of its being *a* triangle, he who is aware (ὁ εἰδώς) that the isosceles has this property is less informed at the quidditative level (ἢ αὐτό) than he who is familiar with its being a triangle. Thus the issue points in a direction precisely opposite to where the foregoing observations seem to tend. The argument is then given a wider application by showing (85b7-15) that this knowledge about the figure taken qua triangle extends further and makes us recognize that the property falls to any triangular figure, whence this knowledge is clearly superior to the singular-bound one.<sup>261</sup>

Next the malicious suggestion of disguised Platonism is censured (85b15-22), and the argument ends with the facetious comment that if one believes that the Aristotelian epistemonik proof entails Entities existing apart from outside things, the fault is not due to the proof but to the hearer. Two more arguments (85b23-86a3) are put forward, then, to show that only the universal proof meets the

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<sup>261</sup> The purport of this argument will be taken up at 86a10-13, and particularly at 86a22-29.

requirement of presenting an explanation, i.e. the reason why the attribute falls to the substrate under examination.

Then a *simplex sigillum veri* argument is developed (86a3-10): the more particular the proof, the more it lands into the area of the indefinite, whereas the universal proof tends to the domain of what is simple (τὸ ἀπλοῦν) and determinate (τὸ πέρας). One has to be aware that qua indefinite, things are not susceptible of genuine knowledge (ἐπιστητά), whereas they are so qua determinate.

After an argument corollary to that of 85b7-15, which points out (86a10-13) that, in fact, the universal proof covers the singular case as well, and so is preferable, a seventh argument addresses the issue from the viewpoint of the use of the middle (86a13-21). To prove more universally, it is claimed, boils down to proving something through a middle which is nearer to the starting-point. (Incidentally, the immediate proposition is nearest of all; in fact, this is itself a starting-point). Now given that the proof <directly> depending on the starting-point is more certain than one less so, the universal proof is more accurate and, therefore, superior. That is why proofs concerning a particular case, which are accomplished by means of the qua-procedure, find their completion in a syllogism of the first figure (particularly *Barbara* and *Darii*); my sections 2.73-2.76.

The series of arguments is concluded (86a29-30) by briefly pointing out that eventually the universal premiss is noetic, while the singular-bound one terminates in sense-perception.

In a similar train of argument Aristotle goes on to show that probative or positive proof is superior to a negative one (ch. 25), as also ostensive proof is superior to proof *ad impossibile* (ch. 26).

#### 6. 42 *On the diverse disciplines*

The various disciplines can now be evaluated in light of the epistemonik procedure. First, they can be ranked according to their different aims and subject-matters (ch. 27). One discipline can be judged to be more accurate than and prior to another on three criteria: (1) if it is about both *the fact that* and the *reason why* (τοῦ ὅτι καὶ διότι), whereas the other is only about the fact, then it is more accurate and prior; (2) if it studies things in so far as they are not embodied in a substrate, while the other takes them as emmattered (thus arithmetic is superior to harmonics); and (3) if it starts from less complex entities, while the other proceeds from entities with an additional connotation (lit. 'from addition'; ἐκ προσθέσεως); thus arithmetic is

superior to geometry. This is explained (87a35-37): “I mean by ‘from addition’, e.g. a unit is a positionless entity (οὐσία ἄθετος), whereas a point is one having position (θετός); I take the latter as an entity conceived with an additional connotation”.

Ross (596) less happily summarizes the contents of this chapter by the heading “The more abstract science is superior than the less abstract”. This may be to the point as far as the second criterion is concerned. The first one, however, has little to do with abstraction. And as far as the third one, taking the notion of πρόσθεσις as the opposite of ἀφαίρεσις<sup>262</sup> is concerned, this should not lead us to take the former in terms of what we call ‘abstraction’, since ἀφαίρεσις should not be taken so either. Both terms refer instead to the semantic process of either singling out, or appending some notional component, respectively. When he contrasts arithmetic with geometry, what Aristotle has in mind is that numbers are more universally applicable than geometrical devices, since the latter, by connoting the general idea of extension, by the same token intimate the idea of material constitution, which makes them more distant from the ultimate starting-points. To put it otherwise, unlike the arithmetic notion ‘unit’, the geometric notion ‘point’ comprises the idea of a substrate underlying certain properties. Of course, the concept of οὐσία used here by Aristotle to signify these mathematical entities should not be taken in any physical sense, just as ‘material constitution’ should not be either.

A discipline is one if it is about one generic kind of objects that are composed of the primary things falling under the genus involved and are parts or attributes of these primary things taken by themselves. One discipline is different from another if their starting-points do not depend on the same things and they are not mutually dependent either. There is evidence for this being the case when it comes to the indemonstrable postulates, since for there to be one single discipline the postulates must be in the same generic class as the things proved. And the latter feature comes about when the things that are proved through them are found in the same class and are cognate (ch. 28).

#### 6. 43 *Sense-perception does not afford genuine knowledge*

After Aristotle (ch. 30) has claimed that there cannot be genuine knowledge of what holds by chance (τοῦ ἀπὸ τύχης), because such

<sup>262</sup> Bonitz, *Index*, 646a13-19.

states of affairs do not meet the necessity requirement, he goes on to show that genuine knowledge cannot be brought about directly by sense-perception. For even granted that sense-perception concerns the object taken as a such-and-such being (τοῦ τοιοῦδε) [e.g. 'man', etc.],<sup>263</sup> and not as a mere *this* of whatever nature (τοῦδέ τινος), still one inescapably perceives a *this* bound as it is to here and now, whereas it is impossible to sense what is universal <in it> and holds in every case (ch. 31, 87b28-31). For example, even if one could perceive of the triangle that it is 2R, we would still seek an epistemonicon proof and would not, as some maintain, truly know this. For sense perception necessarily bears on individuals, whereas genuine knowledge comes about owing to our becoming familiar with what is universal (87b35-39). This is clarified with a fetching example:

*APo.* I 31, 87b39-88a2: Hence if we were on the moon and saw the earth screening it we would not truly know the explanation of the eclipse. For we would perceive that it is actually eclipsed but not why at all, for we have seen that there is no sense-perception of what is universal.

At the same time we are taught how familiarity with sensorial data may lead to the higher stage of grasping what is universal in them, and thus to genuine knowledge:

*APo.* I 31, 88a2-8: Nevertheless, when, from observing this often happening, we had caught what is universal in it, we would possess an epistemonicon proof; for it is from the plurality of particular instances observed that what is universal comes about. The universal is valuable since it discloses the 'because'; hence universal demonstration is more valuable<sup>264</sup> than perception and intellection (τῆς νοήσεως), i.e. with regard to those things whose 'because' is found in something formally different; but for the primitives (τῶν πρώτων) there is a different account.

So it is evident that it is impossible to come to truly know anything provable by sense-perception — unless someone uses the term 'perception' (τὸ αἰσθάνεσθαι) improperly (88a9-11). On the other hand, sense-perception is an indispensable prerequisite for any cognizance, including genuine knowledge. This will be made indisputably clear in the final chapter of Book II. But as early as in the next chapter the basic role of sense-perception will come to the fore.

<sup>263</sup> Note that (just as ποῖόν at times is used to stand for modifications within the category of substance, e.g. *Cat.* 5, 3b15-21) τοῖόνδε at 87b29 refers, not to some item from the category of Quality, but a modification of substantial being (being a man, animal, or stone etc.).

6. 44 *Opinion as opposed to genuine knowledge*

In chapter 33 genuine knowledge, the privileged objective of epistemonik proof, is contrasted with opinion (δόξα). It is important to recognize that to Aristotle, opinion is something quite honourable, even though it is less perfect than genuine knowledge in that it has an object that is contingent and thus unstable.

Firstly, opinion is assessed in the broader context of our being or becoming familiar with the things there are, both the ones that cannot be otherwise than they are and those that can. Evidently, the things spoken of here are states of affairs (πράγματα) — and their logical counterparts are dictums — not the outside things taken apart from our mental acts. Accordingly, we come across the terms ἐπιστητόν and δοξαστόν used in their pregnant senses to stand for what is truly known qua being known and what is opined qua opined, respectively, whereas ‘knowledge’ and ‘opinion’ are to be taken as pieces of knowledge or opinion, including a certain state of affairs known or opined. The contrast found throughout the chapter between knowledge and opinion evidently bears on true opinion.

*APo.* I 33, 88b30-89a4: What is truly known and genuine knowledge differ from what is opined and opinion, because knowledge is universal and comes about through necessities, and what is necessary cannot be otherwise. But there are some states of affairs that are truly the case, but which can also be otherwise; hence there clearly is no knowledge about these things, for then what can be otherwise could not be otherwise. But there is no apprehension (νοῦς) concerning these things— for I take apprehension as a starting-point of knowledge — and so not knowledge without any proof either; that is, belief in an immediate premiss. But it is what is intuitively apprehended, what is known, and what is opined, and also what is named after these which are true. The only conclusion left is that opinion is about what is true but can also be otherwise. This comes down to a belief concerning a premiss which is not necessary, and not reached with the help of a middle.

This is a realistic point of view, Aristotle says (89a4-10). It agrees with appearances, for opinion is unstable, and so are the things opined. In addition, no one thinks that he merely opines but that he really knows, when he thinks that it is impossible for the object to be otherwise; but when he thinks that it is so but that nothing prevents it from being otherwise, then he thinks he merely opines, as, in his view,

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<sup>264</sup> Cf. *APo.* I 24, 85b24-26.



opinion is concerned with such an object, whereas knowledge is about what is necessary (89a4-10).

This being said, the questions may arise (89a11-16) how (1) the same state of affairs can be the object of opinion and knowledge and (2) why opinion will not coincide with knowledge, given the position that it is possible to opine everything that one is familiar with (οἶδεν).<sup>265</sup> For he who is familiar with a state of affairs and the opiner will “keep pace with one another” (Ross), going together through the mediating states of affairs until they land at the immediates, with the result that in the same way in which<sup>266</sup> the former is familiar with the object, the opiner is too. For in the manner in which one can opine the *fact that*, so too one can opine the *reason why*; and the reason why is expressed by the middle.

As is often the case, Aristotle attempts to give a first tentative answer (89a16-23), suggesting that in cases of opinion, perhaps the καθ’ αὐτό requirement is not fulfilled. That is to say, while the opiner may be familiar with a mediating state of affairs expressed by the middle, he may not realise the special inferential power of the καθ’ αὐτό (including this time καθ’ ὅλου) assignment of the attribute under discussion to the substrate. In that case there will be no genuine knowledge of the reason *why*.

Of course, just as in the case of true vs. false opinion, the substrate the opinion or knowledge is about may be the same. For example, taking knowledge and opinion about a man, knowledge is about his being an animal which is a necessary part of his quiddity, whereas opinion concerns the man’s animalhood without being aware that it is a necessary property of his. Therefore what counts is that what is actually thought about the same substrate is different, i.e. either its being opined or its being genuinely known; in other words, knowledge is of the man precisely qua man (and, accordingly, including his being an animal), whereas opinion is of the same person not taken as such:

*Ibid.* 33, 89a29-37: For to opine truly that the diagonal is commensurate is absurd. But inasmuch as the diagonal which the <true and false> opinions are about is the same, in this sense they are of the same thing, but the quiddity falling to each of them [i.e. the diagonal truly or falsely opined, respectively] is, in accordance with the

<sup>265</sup> The verb εἰδέναι covers both ἐπίστασθαι and δοξάζειν.

<sup>266</sup> Reading ὥπερ instead of εἵπερ (MSS).

(different) dictum,<sup>267</sup> not the same. In a similar way genuine knowledge and opinion, too, are of the same thing. For the one is of, say, <a thing's> being an animal in such a way that it cannot *not* be an animal, while the other in such a way that it can be. E.g. if the one is of just what is a man, and the other of man but not of just what is to be a man; for they are the same in stating *that* it is a man, but the fashion in which <this happens> is not.

Hence, that one and the same person can opine and truly know the same thing at the same time is out of the question. For otherwise, it is argued (89a38-b6), he would at the same time hold the belief, say, that a man is precisely that which is an animal — for this is, as we have said, what the impossibility of not being an animal comes down to — *and* not precisely that which is an animal (for let this be what the possibility comes down to).

The chapter winds up with a general remark on other objects of the aforesaid cognitive attitudes, and a brief observation concerning in which disciplines they should come up for discussion:

*Ibid.* I 33, 89b7-9: As for how the rest should be distributed among discursive thought (διάνοια),<sup>268</sup> intuitive apprehension (νοῦς), genuine knowledge (ἐπιστήμη), skill (τέχνη), prudence (φρόνησις), and wisdom (σοφία), *that* is rather a matter partly for natural and partly for moral theory.<sup>269</sup>

The final chapter of Book I is about quick wit (ἄγχινοια), which is the power of hitting upon the middle in an imperceptible time.<sup>270</sup> For example, quick wit makes one see at once that the moon always holds its bright side toward the sun, and quickly grasp why this is so, viz. because it gets light from the sun. Seeing the extremes, i.e. the terms signifying the substrate and the intended attribute, the alert man recognizes all the explanatory states (πράγματα) which serve as intermediates in the process of proving the attribute of the substrate.

From the subsequent example (89b15-20) the common rendering 'middle term' for τὸ μέσον once again appears systematically misleading. The middles are states expressed by dictums: *A* = 'that the bright side is facing the sun'; *B* = 'getting light from the sun'. Taking *C* to stand for the moon, then, the argument will run: 'Now, *B*, getting

<sup>267</sup> I.e. one dictum (in fact Aristotle's 'assertible') reading '[the diagonal's being commensurate]', the other '[the diagonal's being incommensurate]'.

<sup>268</sup> Cf. Plato, *Soph.* 262-263; De Rijk (1986), 209-12.

<sup>269</sup> Barnes aptly refers (193; 1994, 202) to *An.* III, chs. 4-7, where the role of the νοῦς is discussed, and *ENVI*, chs. 3-7, which deal with the other items.

<sup>270</sup> Seidl, who rightly associates (1971, 74) ἄγχινοια with νοῦς, proposes the rendering 'intuition'.

light from the sun, applies to *C*, the moon; and *A*, having its bright side facing that from which it gets its light, applies to *B*; hence *A* applies to *C* through *B*'.

### 6. 5 *The epistemonik process and its basic ingredients*

The first eleven chapters of Book II extensively deal with how to frame an epistemonik proof by studying the roles of the middle and the definiens in particular.

#### 6. 51 *The four steps making up epistemonik proof*

In order to arrive at a genuine epistemonik proof, you have to observe its different preparatory stages. In the opening chapter of *APo.* II, Aristotle lists the four types of inquiry one should start off with. They are:

- (1) τὸ ὅτι or the 'that', which refers to some state of affairs;
- (2) τὸ διότι or the 'through what' this state of affairs is the case;
- (3) εἰ ἔστι or the 'whether something is';
- (4) τί ἐστι or the 'what-it-is'.

These four are standardly indicated as 'the four questions' ('question-types' or 'types of inquiry'). This terminology is somewhat misleading. To begin with, the list contains only three questions, and, what is more telling, the phrase τὰ ζητούμενα primarily refers to the contents of the inquiry, not to the questions themselves<sup>271</sup> (as also appears from the opening words of the next chapter). Therefore it is better to speak of four items of inquiry: (1) is the thesis initially under examination, and the other three ((2)-(4)) concern the different steps of inquiry which are to prove the initial thesis:

*APo.* II 1, 89b21-35: The things we inquire about are equal in number to those we try to know.<sup>272</sup> Now the object of our inquiry is fourfold: (1) the 'that', (2) the 'through what', (3) the 'if it is', (4) the 'what it is.' [re 1 ] For when we seek whether this or that is the case, putting it in a more-than-one-word expression<sup>273</sup> (e.g. whether the-sun's-being-

<sup>271</sup> Semantic Main Rules RIR and RMS; my section 1.71.

<sup>272</sup> I take ἐπιστάμεθα as *praesens de conatu*.

<sup>273</sup> Aristotle means to say that we put this question by using a dictum composed of a substrate term and an attribute term, which expresses a state of affairs, unlike what happens in questions (3) and (4); see below. The Greek text has the phrase εἰς ἀριθμὸν θέντες (the Medieval translations read 'in numerum ponentes'), in

eclipsed is the case, or not the case), we seek the 'that' <it is the case>. Evidence for this: on finding that-it-is-being-eclipsed our inquiry has already come to an end (and if we are aware at the outset that it is eclipsed, we do not ask this question at all). [re 2] When we are familiar with the 'that', we seek the 'through what'; e.g. being aware that-it-is-being-eclipsed and that-the-earth-is-moving, we seek the 'through what' the sun is eclipsed or why the earth is being moved. Now while we inquire about these things in this way, we inquire about some other things in another fashion:<sup>274</sup> [re 3] e.g. whether there is, or is not, a centaur, or a god; I mean: whether there *is* one, or *is not* one, *simpliciter*, and not whether he (it) is white or not. [re 4] And once being aware of the '*that* it is', we seek *what* it is; e.g. 'what, then, is a god?' or 'what is a man?'.

To my knowledge, all commentators seem to regard this enumeration as a fourfold catalogue of *possible* 'questions'.<sup>275</sup> However, it is to the contrary an enumeration of the two pairs of steps that are indispensable requirements for any epistemonical procedure. These two pairs each contain a factual and a quidditative aspect. The first pair, made up of (1) and (2), is concerned with an inquiry focussing on a property to be assigned to a certain entity that is somehow put before us (προκειμένον),<sup>276</sup> most of the time by sense-perception. That they both bear on a state of affairs expressed by a dictum composed of a substrate *plus* attribute is patently clear from the context, particularly from the example of the lunar eclipse ('the-moon's-being-eclipsed' or 'that-the-moon-is-eclipsed'). The first item stands for the state of affairs, while the second is concerned with its αἴτιον. Now the term αἴτιον is used ambivalently in Greek for both the 'cause' by which something is the case, and the 'reason' for which we think something is the case. In the present context, the latter meaning, I take it, is predominant, that is to say, because there is a certain causal relationship

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which, as usual, the word 'number' (ἀριθμός, 'numerus') refers to some countable aggregate of things. One should realize that in Greek and Latin 'number' always stands for 'more than one', 'one' (the 'unity') not being a number but the 'principle of number (counting)' ('principium numeri or numerandi'); my section 12.32 in Vol. II — Barnes (in the first edition, 195) wrongly left open the interpretation of the Greek phrase ("this bizarre phrase") as referring to a number of alternatives ('whether it is this *or* this'), thus ignoring the contrast with 'the other fashion' expressed by ἀπλῶς at 89b31-33, where question (3) contains an alternative as well. In the revised edition this entry is rightly cancelled. McKirahan's suggestion (1992, 188f.) "Could it mean 'quantifying'?" is not very helpful either.

<sup>274</sup> I.e. not using a plurality of extremes, which would make up a composite dictum.

<sup>275</sup> Detel II, 542; cf. Ross, 609 ("all possible subjects of inquiry"); Barnes, 194f.; (1994), 203ff.

<sup>276</sup> Using the label found throughout the *Topics*, e.g. II 4, 111b17-23.

between  $[x]$  and  $F$ , we are able to answer the 'through what' question, for which Ackrill has coined the rendering 'the because'.<sup>277</sup>

As for the other pair, (3) and (4), it is beyond doubt that (a) the subject of each of these devices is an incomposite being, and (b) that this being must be one of the components of the dictum involved in the two first items (1) and (2). With regard to this aspect of the epistemonik procedure it is remarkable that in the common representation of the four questions the  $\epsilon\iota\ \epsilon\sigma\tau\iota$  and the  $\tau\iota\ \epsilon\sigma\tau\iota$  devices are taken to bear only upon the substrate underlying the attribute,<sup>278</sup> whereby, in addition, the former is understood in terms of the mere existence of the substrate ('if there is such a thing as an S'),<sup>279</sup> and  $\tau\iota\ \epsilon\sigma\tau\iota$  is associated with the quiddity of the substrate.<sup>280</sup> It is true that commentators do recognize that the investigator might be inclined to ask these questions about the attribute as well, but this possibility is commonly rejected, in spite of the evidence to the contrary.<sup>281</sup> As a matter of fact, there are two solid reasons for relating the items (3) and (4) to the attribute as well: (a) any assertion may be proved to be false by showing the attribute not to apply to the substrate, whose occurrence in fact is not doubted at all by the opponent;<sup>282</sup> and (b) the quidditative analysis of the attribute is equally important for developing an epistemonik proof as that of the substrate.<sup>283</sup> The force

<sup>277</sup> Ackrill (1981), 360, n. 3: "Aristotle's 'doctrine of the four causes' might better be called his doctrine of the four 'because's'. Neither 'cause' nor 'explanation' is an exact equivalent of *aitia*, but neither will be misleading to those who know the background". The predominance of 'the reason why' over 'the cause by which' also appears from the fact that sometimes the  $\delta\iota\alpha\ \tau\iota$  refers to the effect, not the cause.

<sup>278</sup> Ross, 610 and 611f.; Barnes, 194f.; (1994), 203ff.; Detel II, 544ff.

<sup>279</sup> Among many others (e.g. Owen 1965, 85; Upton 1991, 103ff.; Goldin 1996 *passim*) Barnes, 194 and *passim*; (1994), 55; 203; 215; 218f. It will be argued later on (my sections 6.54-6.57) that this should not be taken to concern general existence claims ('if there are such things as  $F$ s at all'), as though one is checking whether being-an- $F$  perchance represents an empty class.

<sup>280</sup> Ross (610) recognizes that "the phrase  $\tau\iota\ \epsilon\sigma\tau\iota$  does not suggest that only the definition of a *subject* (his italics) is in question", but thinks that things are blurred by Aristotle in the next chapter, when the  $\tau\iota\ \epsilon\sigma\tau\iota$  device, "which was originally limited to the problem of defining subjects, is extended to include the problem of defining such an attribute as 'being eclipsed' (90a15)". Cf. Barnes, 194-6.

<sup>281</sup> E.g. II 2, 90a14ff.

<sup>282</sup> Cf. what is said about denying a given statement in *Int.* ch. 10.

<sup>283</sup> Aristotle thus makes a clear-cut distinction between the substrate and the substrate-somewhat-modified. — Incidentally, this is exactly the same distinction Plato makes in the *Sophist* (261C-264B), after his numerous attempts (in the earlier *Dialogues*) to prize open the Eleatic view of the monolithic  $\pi\rho\acute{\alpha}\gamma\mu\alpha$  (state of affairs) and to analyse it into some entity ('substrate') on the one hand, and its conditions ('attributes') on the other. Plato calls these conditions  $\pi\rho\acute{\alpha}\xi\epsilon\iota\varsigma$ . For the broader

of these theoretical arguments is strengthened by studying the various examples presented by Aristotle in the subsequent chapters.

When in *Top.* II, 4 various rules are presented for framing an effective argument against the opponent, the significance of the τί ἐστὶ device lucidly comes to the fore:

*Top.* II 4, 111b17-23: As regards that which is put before you (ἐπὶ τοῦ προκειμένου), you must examine what thing's presence (τίνοος ὄντος) conditions the presence of the thing in question, or what, given the latter's presence, of necessity is the case (τί ἔστιν ἐξ ἀνάγκης εἰ τὸ προκειμένον ἔστιν). For constructive purposes, you must examine what thing's presence (τίνοος ὄντος) will imply the presence of what is put before you (for if the former is shown (δειχθῆ) to be the case (ὑπάρχον), then the thing in question will also have been shown to be the case); while for destructive purposes, we must examine of what thing the presence (τί ἔστιν) is implied by the presence of what is put before you; for if we show that what is consequent (τὸ ἀκόλουθον) upon the thing in question is not the case, then we shall have demolished the state of affairs put before you.

This passage seems to embody some interesting clues:

(1) The thing put before us (τὸ προκειμένον) is not just an outside thing taken by itself, but a thing involved in a certain state, or a state of affairs expressed by a dictum or *that*-clause. This may be compared with the significance of the τὸ ὅτι device of *APo.* I 1.

(2) Evidently, the phrase τί ἐστὶ, as well as its oblique counterpart τίνοος ὄντος, is to be interpreted in the context of semantic, rather than causal implication. That is to say, if a state of affairs is e.g. indicated by '[x]'s-being-an-*F*', then the quidditative analysis (the τί ἐστὶ) of 'being [x]' and likewise that of 'being-an-*F*' will necessarily entail — or necessarily exclude, respectively — the truth of 'that [x] is an *F*'.

(3) Along the same line of thought, the adjective ἀκόλουθον must be taken to occur in its logico-semantic sense: if you use the expression '*x*' or '*F*', then *eo ipso* you are including their definiens; e.g. when speaking of 'being a man' and 'being white', by the same token you are speaking of 'being an animal' and 'being coloured'.<sup>284</sup>

What is said in the opening lines of *APo.* II, 2 should be interpreted, I take it, along similar lines. Firstly, there is the πρόβλημα 'either-or' frame-work<sup>285</sup> in each pair of inquiry items, viz. in (1) ('being eclipsed *or* not') and (3) ('a god's presence *or* not-presence').

context in Plato see De Rijk (1986), 283-305.

<sup>284</sup> *APo.* I 3, 73a29-31; *Top.* II 5, 112a17 and 22. Cf. the use of ἀκολούθησις in *Cat.* 12-13, and *Int.* 13, as well as in *Top.* II, 8-9, and in *St.* 5 and 28.

<sup>285</sup> In accordance with *Top.* I 4, 101b16-38.

Secondly, each pair contains the τί ἔστι device, the second explicitly (4), while in (2) it is found in the form of the διὰ τί ἔστι variant, which, in the second part of the chapter (2, 90a14-15; 31-32; cf. 8, 93a3-6), is unambiguously said to be equivalent with τί ἔστι. Thirdly, the τί ἔστι device is applied to the quidditative analysis of both the substrate and the attribute.

One should refrain from thinking that Aristotle is inconsistent in using the four key terms. On the contrary, if we observe how consistently he uses them, we are in a much better position to understand the four question-types and the respective cognitive contents correctly.

The following rules of thumb concerning the four inquiry items may now be drawn up:

– The phrase τὸ ὅτι introduces a state of affairs or πρᾶγμα, where πρᾶγμα should be taken to be not just ‘outside thing’ but ‘a thing’s-being-so-and-so’; even if the formula is followed by a loose term, the latter should still be taken to stand for ‘some-(x)-being-an-*F*’, where ‘*F*’ signifies the connotation of the term, and ‘[x]’ refers to the substrate of the initially unanalysed phenomenon, which is perceived by sense-perception and put before us (προκειμένον) for examination. So ὅτι ἔστι means ‘that-*[x]*’s-being-an-*F*-is-the-case’. E.g. at II 7, 92b5-6: “one must also know that [x] is a man”.<sup>286</sup>

– The phrase εἰ ἔστι introduces a subject-somehow-qualified or being-in-a-certain-state. It definitely does not ask about the existence of the substrate (as it is often assumed to do), because its bare existence has already been ascertained by sense-perception.<sup>287</sup> It does not concern the question ‘whether there are such things as signified by the term’ either. Rather it asks whether the entity underlying the intended attribute can be identified as something belonging to the class of things designated by the name used for it.<sup>288</sup> Thus εἰ ἔστι means e.g.

<sup>286</sup> For the use of loose terms (such as ‘man’) meaning ‘being-a-man’ see my section 1.64.

<sup>287</sup> Mignucci (1965), 58; cf. Kahn (1981), 394, who rightly stresses the role of perception: [...] the process by which we are able to define the geometrical objects as such — lines, planes, and solids — is identical with, or simply a more articulate refinement of, the process by which we recognize their existence”.

<sup>288</sup> The question of existence here involved is correctly explained by Gómez-Lobo (1980, esp. 72ff.) as such an identification, *pace* Goldin (1996, 52ff.), who among others (see his footnote 24 on p. 53) fails to see that to Aristotle, the ‘universal’ required for genuine knowledge is always enmattered in a particular (my sections 6.38; 6.54; 6.87; and 9.7 and 10.7 in Vol. II). These interpreters all ignore that the “imperishable universals concerned” (Goldin), which indeed make

‘if there really is, here and now, an instance of a god, (a centaur, and so on), or not’, which boils down to asking whether the underlying entity can be truly identified as a god, a centaur, etc. Or, if the question is focussed on the attribute, ‘if there really is an instance of, say, being eclipsed’.<sup>289</sup>

— The phrase  $\tau\acute{\iota}\ \epsilon\sigma\tau\iota$  asks for the correct categorization (‘appellation’) of the substrate of the present phenomenon.<sup>290</sup> Thus it concerns not only the substrate’s definition, but, what is more, its identification as formally ‘being-such-and-such’, e.g. the categorization of a figure (which, in fact, is an isosceles, say) as a triangle, when ‘triangle’ precisely corresponds to the attribute under demonstration.<sup>291</sup> In other words,  $\tau\acute{\iota}\ \epsilon\sigma\tau\iota$  asks for the quidditative analysis of the substrate or attribute,<sup>292</sup> since such an analysis is indispensable for discovering whether they are incompatible or compatible, and in the latter case perhaps commensurately related, so that the intended

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premisses of demonstration both eternal and universal, surely do not rule out their being immanent (qua instantiations) and also observed qua inherent in particulars. This makes Goldin’s assumption of ‘epistemic substances’ in Aristotle superfluous and risky as well because of its Platonic overtones.

<sup>289</sup> See my section 6. 54. Upton (1991), who distinguishes three levels of the ‘If-it-is question’ in Aristotle (the ordinary level, the scientific level, and the metaphysic level; 101), concentrates his analysis on what he labels ‘the scientific If-it-is question’. He thinks (105) that this question (including the ‘scientific awareness of existence’) differs from ordinary questions (including the ‘ordinary awareness of existence’). However, his distinction entirely depends on his mistaking the dictums concerning *contingent* particulars for a kind of *necessary* ‘epistemic’ entities quasi existent by themselves, thus unhappily muddling the logical and the ontological domains. Interpreting *APo.* I 8, 75b21ff. and *EN* VI 3, 1139b19-24, along these lines Upton seems to ignore the fact that the ‘eternal thing’ required for genuine ‘scientific’ knowledge is actually nothing but the particular instantiation — called ‘eternal’ in the special sense of eternally reproducible, and alluding to the eternal reproducibility of forms which are successively embodied in (perishable) particulars (cf. Upton, 105), rather than something eternal by themselves. Note that Upton concedes (*ibid.*) that his distinction of the above levels and ‘If-it-is questions’ are not drawn by Aristotle. Upton’s assumption of ‘eternal things’ in the context of these distinctions is, like Goldin’s assumption (1996) of ‘epistemic substances’, merely due to his unduly stretching some texts in which Aristotle is *logically* marking off instantiations from their instances.

<sup>290</sup> In principle, the  $\tau\acute{\iota}\ \epsilon\sigma\tau\iota$  question is only asked with reference to the identification of things presented by sense-perception; cf. *APo.* II 1, 89b32-33. Smith (1989, *Introd.*, XXVI) is quite right that “in fact, Aristotle in practice assumes that *no* <appellative, De R.> term in his system is empty”.

<sup>291</sup> For the indispensability of this procedure for a true epistemonical proof see above, my section 2.1.

<sup>292</sup> Following Ross (609-12), Upton (102) rightly claims that the question can be asked of both substrates and attributes of objects under examination.



thesis can be proved to be a real fact (ὅτι ἔστι), and apodeictically so (διότι ἔστι).

— Finally, the phrase τὸ διότι asks for the ‘why’ of the state of affairs. It refers to the essential mark presented by the ‘middle’ or ‘medium demonstrationis’. In effect, it asks for the explanation of the truth of the state of affairs under investigation.

#### 6. 52 *The ‘mediating state’ or ‘middle’ (‘medium demonstrationis’)*

In chapter 2 the author introduces the pivotal element of any epistemononic procedure, viz. the epistemononic intermediary or ‘middle’ (τὸ μέσον, later called ‘medium demonstrationis’). Unlike the Medievals, most modern commentators rather carelessly take τὸ μέσον for the middle term (μέσος ὅρος) of the syllogism. Linguistically speaking, the μέσον is not a term, but a complex expression, in fact an incomplete dictum referring to a state (of affairs); in other words, regarded from the semantic point of view, the ‘middle’ is not just a thing, but a thing-so-and-so-qualified.<sup>293</sup>

To understand the linguistic nature of the μέσον is of paramount importance. Its common rendering ‘middle term’ is confusing in that it suggests that Aristotle has some incomplex thought in mind, such as ‘man’, ‘tree’, ‘stone’. But, like its counterpart τὰ ἄμεσα (the immediates), μέσον should be associated with a (complete or incomplete) dictum.<sup>294</sup> When he looks for a ‘because’, the investigator will spot it in the μέσον (‘the intermediate state of affairs’); and the ‘because’ is not, say, ‘animal’ but ‘[x]’s being an animal’. Or taking Aristotle’s favourite example, if one attempts to explain the state of affairs that-there-is-a-noise-in-the-clouds, the appropriate meson will be that-there-is-a-quenching-of-fire-in-the-clouds, rather than just the entity signified by the incomplex term ‘quenching of fire’. In other words, the ‘middle’ is a pragma. From the semantic point of view, there are two sorts of pragma, one in the form of a complete dictum,

<sup>293</sup> See at II 2, 89b5ff. where Aristotle identifies the ‘middle’ as an explanation of a fact, rather than just a ‘thing’. Of course, when he frames an epistemononic syllogism, the investigator may introduce the key term which occurs in the phrase expressing the ‘middle’ or ‘medium demonstrationis’ as the middle term of the syllogism or the deduction. Our sections 2.4 (end); 2.6-2.7. — Note that on one occasion (II 4, 91a31) the middle is called μέσος λόγος, and that λόγος always stands for (the content of) a complex expression (our section 3.41).

<sup>294</sup> E.g. *APo.* II 14, 98a24-34.

‘that- $[x]$ -is-(an)- $F$ ’ or ‘ $[x]$ ’s-being-(an)- $F$ ’, the other as an incomplete dictum, ‘being-(an)- $F$ ’.

A nice illustration of the pragma character of the middle is found in I, 13, where Aristotle gives an example of an erroneous assignment of a middle that is too wide (in Aristotle’s words: “is positioned outside”) to present the right ‘because’:

*APo.* I 13, 78b13-23: In cases in which the middle (τὸ μέσον) is positioned outside — in these too the proof is of the fact and not of the ‘because’; for the ‘because’ is not stated. For instance, why does the wall not breathe? Because of its not being an animal (ὅτι οὐ ζῷον). <Wrong answer!>; for if this were the ‘because’ of its not breathing, being an animal would have to be the ‘because’ of breathing, i.e. on the principle that if a negation gives the ‘because’ of something’s not applying, the affirmation does so concerning its applying — e.g. if imbalance of the hot and cold elements is the ‘because’ of not being healthy, their balance is the because of being healthy — and likewise too if the affirmation is the because of something’s applying, the denial is of its not applying. And when things are set out in this fashion, what we have said does not result; for not every animal breathes.<sup>295</sup>

Evidently, the ‘middle’ presenting the ‘because’ stands for πράγματα or things involved in modes of being as conveyed by dictums, not by single terms.<sup>296</sup>

Aristotle goes on to explain the pivotal role of the mediating state of affairs (the ‘middle’), by showing that both when we proceed by means of the items (1) and (3), and are led by the other two, (2) and (4), we are in fact looking for the middle:

*APo.* II 2, 89b36-90a1: “What we are looking for, then — and what after finding we are familiar with — are the aforesaid things and thus many. Now whenever we are looking for (1) the ‘that’ or (3) the unqualified ‘if’, we are seeking whether there is, or is not, a ‘middle’ for supporting this. And whenever, after having come to be aware either of the ‘that’ or the ‘if’ — or <to put it differently>, either operating in the descriptive fashion (1) or the simple one (3) — we go on to inquire (2) the reason why, or (4) the quiddity, then we are seeking *what* the middle is.

As so often, Aristotle’s manner of speaking is dangerously elliptical, but the dangers are not insuperable, as long as we try to discover how the main train of thought sketched in the opening chapter of Book II might be proven to be consistent. Obviously in the opening lines of chapter 2, Aristotle goes on to elucidate the epistemonik procedure

<sup>295</sup> To Aristotle, only warm-blooded animals breathe (*Respir.* XXII (XVI), 478a28-31).

<sup>296</sup> Mure (*Oxford Translation*) rightly has ‘the middle’, not ‘the middle term’.

which was outlined in chapter one, in some more detail. What he is trying to say is (a) that when we follow the *modus operandi* embodied in the (1) - (3) items — which, as we saw, focusses on a certain attribute as being assigned to a certain substrate — we are in fact inquiring *whether* there is a ‘middle’ substantiating our enquiry, and (b) that, once we have established the ‘that’ and the ‘if’ <and, accordingly, have found that there *is* a middle>, we proceed, by using the questions (2) and (4), to ask the ‘why?’ and the ‘what is it?’, then (τότε) we are looking for the *quiddity* of the middle.

Our initial embarrassment may have been increased by the surprising way in which the τὸ ὅτι ἔστι course is contrasted with the τὸ εἰ ἔστιν ἀπλῶς at 89b39, where the τὸ ὅτι device is represented by the alternative phrase τὸ ἐπὶ μέρους. *That* the latter phrase is used as an alternative for τὸ ὅτι clearly appears from Aristotle’s exemplification (90a2-5) of τὸ ἐπὶ μέρους as opposed to ἀπλῶς: “I mean by speaking of the ‘that’ or the ‘if it is’ in a qualified sense (ἐπὶ μέρους) or an unqualified sense (ἀπλῶς) this: in a qualified sense, ‘Is the moon eclipsed?’ or ‘Is the moon increasing?’ (for in such cases we seek if it is (or is not) *this* or *that*); in an unqualified sense, ‘if the moon is, or is not, there’ or ‘if it is, or is not, night’.”<sup>297</sup> Hence Aristotle (90a5-9) can infer that in all these enquiries we are seeking either *if* there is a middle, or (after finding that there is one) *what* it is quidditatively; for the middle is the explanatory element, and *this* is what in all cases is sought after. Take, for instance, (1): ‘Is it eclipsed?’; this leads to (2) and (3): ‘Is there some explanation or not?’; after that, once we are aware that there is one, (4) we seek *what* this is, quidditatively. This is explained:

*Ibid.* II 2, 90a9-18: For the explanation of the <investigated> entity’s being, not its being-such-or-such, but *simpliciter* its being there (ἀπλῶς τὴν οὐσίαν), or of its being, not *simpliciter* but its being one of the things that hold of it in itself or coincidentally<sup>298</sup> — *that* is the

<sup>297</sup> The sense of ἐπὶ μέρους (as opposed to ἀπλῶς) = ‘in a qualified sense’ should not be taken extensionally nor be associated with the notion of quantification (*pace* McKirahan 1992, 188f.). In the present context the intensional sense of μέρος is in order according to which it may stand for any specification or differentiation of a certain notion; see Bonitz, *Index*, 455b33-34; 46-60. The rendering ‘partially’ (Barnes; cf. McKirahan), which unfortunately leads one to think of quantification, seems to have been suggested by the extensional use of μέρος, which is found in the phrase κατὰ μέρος; see my section 6.34. — Tricot’s ‘existence partielle’ lacks good sense.

<sup>298</sup> It cannot be overemphasized that the use of the term ‘coincidentally’ does not just mean ‘perchance’, but connotes the speaker’s focussing on a thing’s

mediating state. I mean by '<what is> *simpliciter*' the underlying substrate (τὸ ὑποκείμενον), e.g. moon, or earth, or sun, or triangle; and by the modification (τὸ δὲ τι) 'being-eclipsed', 'being-equal', 'being-unequal', 'whether being-in-an-interposition or not'.

In all these cases the middle is the argument's pivot, "for in all of them", Aristotle says (90a14-15), "the 'what it is' ('quiddity') and the 'through what it is' ('explanation') are the same". For example (90a15-19): 'What is an eclipse?' — 'Privation of light from the moon by the earth's screening'. — 'Why is there an eclipse?' (or 'Why is the moon eclipsed?') — 'Because the light leaves it when the earth screens it'.

That the search is all about the middle is made clear, Aristotle continues (90a24-30), in cases in which the middle ('mediating state of affairs')<sup>299</sup> is perceptible by the senses. The search for a middle only takes place when it is not directly given in sense-perception; "for we seek it if we have not perceived it" (90a25). If we were on the moon we would not *seek* whether an eclipse was coming about nor why, but it would be evident at the same time, immediately, so to speak. In that case we would arrive at universal knowledge by generalizing the sense-datum 'that-the-earth-is-now-screening-the-sunlight' to the universal 'that-the-earth's-screening-the-sunlight is privation of light from the moon'.<sup>300</sup> But if direct sense-perception fails to provide us with the reason *why* of the phenomenon observed the search for a middle is in order.

Some more light is shed on this by a passage of the first Book, ch. 31. In this chapter, the author argues that there can be no apodeixis through sense-perception. For even granting that perception is of the substrate-including-the-attribute, and not of the subject-by-itself, still what we perceive is bound to be a single spatio-temporal particular, because it is impossible to perceive what is universal. Even if we were on the moon and saw the-earth-intercepting-the-light-of-the-sun, we would not identify the latter as the cause (explanation) of the eclipse.<sup>301</sup>

The middle (or intermediate state of affairs), then, has turned out to have a key-function in the epistemonik procedure, and,

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feature that, however essential it may be to it in itself, is adventitious with regard to the issue under examination; my section 6.34.

<sup>299</sup> This passage among others aptly shows the inappropriateness of the common rendering 'middle term'.

<sup>300</sup> For this generalization see I 31, 88a2-5 and 11-17.

<sup>301</sup> This important passage is also discussed in Seidl (1971), 72.

accordingly, acts as the backbone of the four basic items discussed in II 2. What follows this fundamental chapter is quite apt to elucidate the role of the middle, as well as the two other vital ingredients of epistemonik proof, substrate and attribute.

### 6. 53 *Substrate, attribute, and the role of definition*

To Aristotle the ultimate *ratio* of the four items of inquiry, which are at the basis of any epistemonik inquiry, is to enable the investigator to hit upon the proper explanation of the initially unanalysed phenomenon presented to his mind by sense-perception. The proper procedure to conduct such an inquiry is to seek the appropriate 'middle'. By means of the appropriate middle, one can prove the inherence of some essential, commensurate attribute in the substrate, i.e. the hypokeimenon of the phenomenon under examination. Now such an essential inherence can only be revealed through a quidditative analysis of the substrate's (and/or the attribute's) nature. This is where definition comes in. This move cannot come as a surprise after the unambiguous reduction of the epistemonik procedure to 'finding the 'middle'', and the identification of the τί ἐστὶ and διὰ τὸ ἔστι devices in chapter 2.

Chapter 3 opens with evidence of the basic features of Aristotle's argument in *APo.* II by extrapolating the τί ἐστὶ question:

*APo.* II 3, 90a35-b1: It is clear, then, that whatever we are after, it is a search for a 'middle' <for which the 'what-it-is' (τί ἐστὶ) question is pivotal>. Let us now say how one shows 'what-it-is', and what is the manner of the reduction, and what definition (ὁρισμός) is and what its object is, first going through the puzzles about them. Let us begin our remarks in the way most appropriate to the ensuing arguments.

Accordingly, the greater part of Book II of *APo.* deals with definition. Anticipating for a while the 'ensuing arguments', it will be the definition of a pragma (a state of affairs, such as 'the-moon-being-eclipsed' or 'a-noise-occurring-in-the-clouds') that is at the focus of Aristotle's interest, rather than that of single things designated by incomplex terms, such as 'moon', or 'noise'.<sup>302</sup> Taking the famous thunder example (93a22-94a10), the investigator should, first, know through the nominal definition of 'thunder' that 'thunder' stands for 'noise-occurring-in-the-clouds', and, next, he has to identify this 'there-

<sup>302</sup> See the lucid exposition in Ackrill (1981), 99ff.

being-noise' as 'there-being-quenching-of-fire'. When he has reached this point, he knows the 'middle' ('cause' or 'explanation') of the initial phenomenon 'thunder'.

Now that the four preparatory steps have been accomplished, the proper (syllogistic) proof can be framed. In the syllogistic procedure this 'middle' will act as the 'middle term'<sup>303</sup>, in a way like the following:

*First, the nominal definition:*

'there-being-thunder' is equal to<sup>304</sup> 'there-being-some (as yet unidentified)<sup>305</sup> noise-occurring-in-the-clouds';

*Next, the syllogism may be framed:*

'there-being-this-sort-of-noise-occurring-in-the-clouds' is equal to 'there-being-quenching-of-fire';

Now, 'there-being-quenching-of-fire' commensurately applies to 'thunder-noise';

Therefore the noise in question is thunder.

The role of definition will receive careful consideration from II 3, 90a34 onwards, right after the author's discussion of the four inquiry items. Aristotle's own view (found at II 8, 93a16ff.) is preceded by an extensive discussion of a series of difficulties concerning alternative opinions (II 3-6). Chapter 7 preludes the basic discussions of Aristotle's proper view of the role of definition presented in II, 8-10. In the present section we shall consider the proper task of definition in the context of the four items of inquiry, as it comes to the fore in Aristotle's evaluation of some alternative opinions.

One preliminary remark should be made. The term 'definition' (Greek ὁρισμός or ὅρος) is sometimes used to stand for a definition taken as a propositional formula, such as 'Man is a two-footed animal'

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<sup>303</sup> Ackrill (1981 100), is right in noticing "that a syllogism of the 'because', which gives the reason for something, does not have the reason as its conclusion, but as its middle term."

<sup>304</sup> 'Is equal to' = 'may be defined as'. For the role of definition in the epistemic procedure see my sections 6.55-6.57.

<sup>305</sup> This is what Aristotle means when he says (at II 8, 93a21-24) that "as to whether the thing under discussion is, <sometimes we grasp it coincidentally, sometimes> having some grasp of the thing itself, e.g. of thunder that it is a sort of noise in the clouds, and of eclipse, that it is a sort of privation of light; and of man, that he is a sort of animal; and of mind, that it is something moving itself." See the pertinent remarks by Ackrill (1981, 102) on the problem "that it is surely not necessary that his [the investigator's] original guiding idea should survive intact as part of the real definition" (which is to be given in order to hit upon the appropriate middle).

— or rather, I take it, for the procedure of defining in general — but also, somewhat loosely, and in fact more frequently, for the predicative part only of this formula, i.e. what we nowadays call the ‘definiens’ (‘two-footed animal’).<sup>306</sup> More than once these two uses are found side by side in our texts. E.g. ‘horismos’ is used in the former sense at II 3, 90b9-10 and 19-27, and in the latter sense in the same chapter at 90b35 and 91a1.<sup>307</sup> In the sense of ‘definiens’ the ὁρισμός equals an unasserted dictum (‘assertible’), or ‘thing-being-so-and-so’, and is quite different from any sort of statement.<sup>308</sup>

Returning now to chapter 3, its purport is to make clear the role definition might seem to have in the epistemonik procedure, what it may contribute to, and what it is not up to. One might puzzle over whether to know something by definition and by epistemonik proof (ἀπόδειξις) comes down to the same (90b1-3). Or is this impossible? An answer in the affirmative is suggested (as is indicated by the subsequent elliptical use of γάρ (= “Yes, it is impossible; for ...”). Aristotle presents (90b3-27) several arguments to show that whereas the definition always provides us with a thing’s quiddity, deductive proofs, and inductive ones as well, have a broader range of what they make us familiar with, including all kinds of attributes of a substrate, both essential and incidental ones. To put it briefly, the definiens discloses a thing’s quiddity, without *proving* that it applies to something,<sup>309</sup> whereas an apodeixis *proves by means of a ‘middle’* that a certain attribute applies to something. For this reason, a definiens belongs to the unprovable starting-points of epistemonik proof. If the definiens were provable too, there would be an infinite regress.

Subsequently Aristotle presents further evidence of the unprovability of the definiens (90b28-91a6). (1) There is no proof of what is expressed by the definiens, viz. a thing’s quiddity, because any proof has to assume a thing’s quiddity, that is to say, that [x] or [y] is such-and-such a thing. Therefore mathematical proofs identify [x] as a unit or [y] as an odd number, without proving it. (2) Every proof assigns some attribute to a substrate (‘that [x] is F’ or ‘[x]’s being

<sup>306</sup> E.g. *APo.* I 33, 89a17ff. Barnes, 190; (1994), 198f.; Brunschwig (1981), 89.

<sup>307</sup> See Ross *ad loc.* For the synonym λόγος used by Aristotle to stand for ‘definiens’ rather than ‘definition’ see De Rijk (1986), 115-7 and my section 3.41.

<sup>308</sup> See also *An.* III 6, 430b28-30, where the non-statemental nature of defining qua ‘identifying something as such-and-such a thing’ is contrasted with the statement about a man’s being pale or not being pale.

<sup>309</sup> *APo.* I 3, 72b18-25; 22, 84a29-b2; cf. I 2, 72a18-24; 10, 76a32-36.

(an) *F*'), and then asserts or denies this dictum.<sup>310</sup> But within the definition (ἐν τῷ ὁρισμῷ) nothing is said of ('applied to') some other thing, e.g. neither animal of what is two-footed nor two-footed of what is an animal; nor indeed a figure of what is a plane, for what is a plane is not quidditatively just a figure nor the other way round. (3) To disclose a thing's quiddity is different from showing that it is the case.<sup>311</sup> So the definition reveals what a thing is, quidditatively, i.e. by itself, but a proof makes clear that this attribute applies, or does not apply, to it. (4) There is still another<sup>312</sup> difference between the ὅτι ἔστι expressed by a proof and the τί ἐστι expressed by a definition: that is to say, though as a rule each thesis has its own proof (just as each thing has its own definiens, for that matter), sometimes one and the same proof bears on different theses, viz. in cases where the different substrates are related as a part to its whole. For example, if being 2R has been proved to hold of every triangle, then *eo ipso* this has been proved of the isosceles, because one is the part, the other the whole. However as for the ὅτι ἔστι a proof is concerned with, and the τί ἐστι involved in, a definition, but these two are not related to one another in this way; for neither is part of the other.

The second item is very instructive of what Aristotle understands by 'defining' in this context. What he means to say is that if you define a man as, say, a two-footed animal, your definition does not imply that 'man' is formally the same as 'two-footed animal', despite the fact that it does imply that the man in question is materially the same as this two-footed animal. By the same token it seems that Aristotle takes 'defining' as 'identifying as an instance of that which is conveyed by the definiens'. This kind of defining has nothing to do with predicating a definiens of a subject, and is indeed quite alien to statement-making in general. It concerns the semantic issue of appellation instead, by which something is designated as such-and-such a thing, and the material sameness of the two significates is implied, leaving their formal diversity aside.

Pursuing this line of thought the third item is clear enough. When actually applied to some particular, the definiens discloses its

<sup>310</sup> Cf. *APo.* I 10, 76a32-33 *juncto* I 1, 71a11-17. The lines 90b33-34 can be adduced in support of my analysis of Aristotle's statement-making utterance (my sections 2.15-2.17).

<sup>311</sup> The scholarly dispute about the 'existential import' of the definition will be discussed in the next few sections.

<sup>312</sup> Reading (ἐτι) ἐτέρου at 91a2.



quiddity but, unlike an epistemonical proof, it does not *prove* that the definiens applies to it. In fact, the second and third items anticipate the distinction between the unapplied definiens taken as just a formula, and the definiens as applied by the investigator; a distinction, for that matter, which will play a key role in Aristotle's discussions from II, 7 onwards, chs. 8-10, in particular.

In chapter 4 some more arguments are forwarded (91a14-b11) to show that the substitution of a single term by its definiens cannot be proved to be correct. Unlike the syllogism, which, through a middle (term), proves that of a thing some other thing holds, a definiens is both peculiar to it and said of it in its own quidditative column (ἐν τῷ τί ἐστι κατηγορεῖται); and these necessarily reciprocate. But that a certain definiens applies to something signified by a single term [*x*] is never susceptible of genuine proof, since the intended middle will only do if we assume the correctness of the definiens in advance, and in doing so a begging of the question cannot be avoided.

The chapter presents an interesting discussion of what the question to genuinely 'prove' a definiens would boil down to. The main line of argument is this: If you are to 'prove' a definiens to apply to something, you should frame a deduction proving this *through a middle*. However, there is no room for a middle mediating between the two, since the (two terms conveying the) definiendum and the definiens reciprocate (91a14-18):

*Ibid.* II 4, 91a14-21: A deduction shows (δείκνυσσι) something of something through the appropriate<sup>313</sup> middle. But what a thing is [as signified by the definiens] both is proper to it and is said of it in virtue of its quiddity (ἐν τῷ τί ἐστιν). And these necessarily convert; for if *A* is proper to *C* it is clear that it is also proper to *B*, and this to *C*; hence all are proper to one another. Yet truly (ἀλλὰ μὲν), if *A* falls to every *B* quidditatively (ἐν τῷ τί ἐστιν), and *B* is said of every *C* quidditatively, holding of its complete quiddity (καθ' ὅλου),<sup>314</sup> then necessarily *A* too is said of *C* quidditatively.

The core of the argument is that the intended middle, 'being a *B*', inasmuch as it is equally assigned to *C* commensurately, turns out to be a superfluous element of the intended deduction. Putting it differently, given that the definiens (*A*) and the definiendum (*C*) formally

<sup>313</sup> For this use of the definite article in Greek see Verdenius (1981), 351, and Kühner-Gerth I, 593.

<sup>314</sup> Reading καθ' ὅλου instead of the common reading καθόλου ('universally'), not only because alongside παντός 'universally' is pleonastic, but also because the idea of convertibility and commensurateness is substantial for the argument.

reciprocate, any middle (*B*), too, will be formally convertible with both *A* and *C*, so that its mediating function is nullified.

The argument is continued by its *a contrario* counterpart (91a21-26), in which the strictly formal approach — which consisted in taking each one of the three elements, viz. the definiendum, the definiens, and the intended middle *qua tale* — is put aside, apparently to prevent the aforesaid inconvenience. What should be left out, is indicated (91a21) by the participle διπλώσας. This verb is in fact a *hapax* in Aristotle. Barnes renders this ‘by doubling’, which he explains as making double use of the subscript ‘*df.*’<sup>315</sup> I think to the contrary that this verb here stands for the semantic process of focalization and comes down to specifying concepts by using the reduplicative qua-functor (Greek ἧ, Latin ‘qua’), such as in saying reduplicatively ‘man qua man’, ‘being qua being’, and so on.<sup>316</sup>

In the *a contrario* argument Aristotle claims that if you do not take the definiendum and the definiens in this special way, viz. in taking either of them by quidditative reduplication, then it will no longer necessarily follow — i.e. through the intended middle, *B* — that the definiens (*A*) must be said of the definiendum (*C*) quidditatively, assuming that *A* holds of *B* quidditatively, but does not hold quidditatively of *B*’s complete extension.<sup>317</sup> However, this will not get you what you are after, since both these, to wit *A* and *B*, will contain the mediating quiddity, and so again *B* will hold of *C* quidditatively; and this will bring you back into the previous undesirable situation of using an entirely superfluous middle:

<sup>315</sup> Cf. Bonitz (*Index*, 201a6-7), who takes this participle to mean “in utraque protasi addens τὸ τί ἐστὶ”.

<sup>316</sup> On the common interpretation (Ross, Tredennick, Mure, Tricot, Barnes, Detel), the verb is not taken as a technical term to refer to quidditative reduplication, but just to indicate the twofold use of the ἐν τῷ τί ἐστὶ device, i.e. both in the major and the minor premiss. I do not see the cogency of Aristotle’s argument on this interpretation. Notice that both Barnes (199f.) and Detel (II, 581f. and 584) raise objections to Aristotle’s argument (as they take it and on their interpretation of the verb). The simplex διπλοῦν should be associated with the composite ἐπαναδιπλοῦν as used at *APr.* I 38, 49a11-18.

<sup>317</sup> Barnes’s translation (“but of what *B* is said of <*B*> does not hold ...”; cf. Tricot *ad loc.*) is based upon ungrammatical Greek; for a change of the subject of the sentence from *A* to *B* (owing to Ross and Barnes inserting ‘<τὸ *B*>’ at 91a23) requires the use of an adversative conjunction to express the ‘but’. In the revised edition Barnes has “if *A* holds of *B* in what it is, but *B* does not hold in what it is of what it is said of” in which a similar change of the subject cannot be accounted for by the Greek text.

*Ibid.* 4, 91a21-25: On the other hand, if you do not take them in this way by doubling (διπλώσας), then it will not necessarily follow that *A* should be said of *C* *quidditatively*, viz. if *A* holds of *B* quidditatively, but not of all things<sup>318</sup> of which *B* holds quidditatively. <But this move of omitting the doubling will be of no use; for> evidently (δὴ) both of them will contain the (mediating) quiddity,<sup>319</sup> so that clearly (ἄρα) in this case, too (καὶ),<sup>320</sup> *B*, when said of *C*, will make up its quiddity.

Next the aforesaid inconvenience is shown (91a25-26) to be still more puzzling: not only is the middle redundant, but the intended proof also seems to contain a begging of the question: one is assuming what one is trying to prove.<sup>321</sup> This begging of the question concerning the quiddity is not only indicated by Aristotle's use of πρότερον at 91a26 but also by his designating the quiddity as prematurely occurring in the deduction with the τὸ τί ἦν εἶναι formula which, owing to its containing the imperfect tense, is typical of the quiddity as turning up in the conclusion.<sup>322</sup>

This begging of the question, then, is illustrated, and once again it is emphasized that definitions are not susceptible of epistemonik proof:

*Ibid.* 4, 91a26-32: In general, if it comes to revealing (δεδῆξαι) a man's quiddity, let *C* be (the definiendum) man, and *A* its quiddity (definiens), whether 'two-footed animal' or anything else. Now if we are to have a deductive proof <showing the definiens to hold of the definiendum> it is necessary for *A* to be said of every *B*, and there will be another intermediate account (ἄλλος λόγος μέσος) substantiating<sup>323</sup> this, so that this too will be man's quiddity. Thus one assumes what one has to show; for *B* too is man's quiddity.

In the subsequent lines (91a33-35) Aristotle goes on to make clear that if you must interpose a step with such a superfluous middle you

<sup>318</sup> Supply: <among which (>. Barnes translates: "but of what *B* is said of <*B*> does not hold in what it is"; similar translations are found in Tredennick and Tricot, who all ignore that *A* is the subject of both parts of the sentence. See my previous note.

<sup>319</sup> Or, taking τὸ τί ἐστὶν as subject, not as anticipated object: "the (mediating) quiddity will keep both these". For this 'inverted' use of ἔχειν see Liddell & Scott s.v. A 8.

<sup>320</sup> Taking καὶ in the same way as the καὶ in *apodosis*; see Liddell & Scott s.v. B 3.

<sup>321</sup> Tredennick, 186, n. a; Tricot, 173, n. 3.

<sup>322</sup> Aristotle's striking way (at 91a25 and 26) of using this formula alongside the simple τὸ τί ἐστὶ formula is commonly overlooked by the commentators. Notice that at 91b3 and 8 and 10 the τὸ τί ἦν εἶναι formula is equally used to indicate the quiddity as turning up in the (intended) deduction.

<sup>323</sup> Taking τούτου as a *genitivus obiectivus*. It is commonly taken as a *genitivus comparationis* after ἄλλος ('different from'). But in such cases ἄλλος is used in the sense of ἁλλοῖος ('of a different nature'); see Liddell & Scott s.v. III 2. I cannot see, however, why the second middle should be of a different *nature* from the first, *B*.

must recognize what is primitive and immediate and, accordingly, does not have to be proved, and is not susceptible of proof either. Whenever one embarks on such a proof of a definiens, the aforesaid reciprocation will naturally jeopardize the deduction owing to the unavoidable *petitio principii*. This is first illustrated by the argument for the thesis that the mind is a self-moving number as developed by Xenocrates, who seemed to argue thus: 'the mind *qua mind* is the cause of its own being alive; and what is the cause of its own being alive is *qua tale* a number that moves itself; therefore etc.'. Aristotle claims that such arguments boil down to postulating that mind is precisely what is a number that moves itself, i.e. formally the same thing as number (91a35-b1).

However it turns out that such formal identifications do not obtain. This is illustrated by an analogue: Despite the possible extensional identity of man and animal in, say, Callias and other human beings belonging to the class of animals, there is no formal identity between them,<sup>324</sup> and, accordingly, no reciprocation either, which, *nota bene*, is required for there to be a genuine couple of definiens and definiendum. In sum, if *A* follows *B*, and this *C*, then it is not the case that the formal quiddities of *A* and *C* are identical. This is evidenced by contrasting quidditative sameness ('formal identity') with 'belonging to the same class of things' ('material or extensional identity'):

*Ibid.* II 4, 91b1-7: For it is not the case that if *A* follows *B*, and this *C*, then *A* will be what it is to be *C*, but it will only be true to state this,<sup>325</sup> even if being *A* as a quidditative element is said of every *B*. For what it is to be an animal is said of what it is to be a man (for it is true that every instance of being a man is an instance of being an animal, just as it is true that every man is an animal), but not in the sense of their being just one thing.

The purport of this passage is to show that a genuine deduction only involves an extensional identification (in terms of class memberships) between the elements, definitely not a formal identity. But the latter is the key notion in the relationship between definiens and definiendum. Hence any attempt to 'prove' a definition is bound to be abortive.

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<sup>324</sup> In Aristotle's words (91b7): "but not in the sense of them being one thing".

<sup>325</sup> I.e. 'that *C* is an *A*, through either's being an instance of *B*' (according to *Barbara*).

The final conclusion from the discussions found in this chapter is obvious. Of no definition there will be a deduction; either the required reciprocation between definiens and definiendum is missing, and so is the required *modus operandi* in terms of the qua-functor, or, if this method is applied, the process is vitiated by begging the question:

*Ibid.* 4, 91b7-11: Thus if you do not take the notions featuring in the deduction in the aforesaid fashion <of accepting them reduplicatively><sup>326</sup> you will not deduce that *A* is what it is to be *C*, i.e. its real nature. And if you do take them in that fashion you will already have assumed *what* the quiddity of *C* is, viz. 'being *B*', with the result that its being 'proved' (ἀποδέδεικται) is out of the question; for you have assumed that which was forwarded as a problem in the beginning.

In chapters 5 and 6, finally, alternative attempts to 'prove' definitions are rejected. First the Platonic method of division (διαίρεσις) should be turned down as a means of accomplishing such a proof, as was shown earlier in the analysis of the syllogistic figures (*APr.* I, ch. 31). Nothing indeed prevents them, in the case of phrases produced by division, from applying to a thing; but they do not express its quiddity (ch. 5, 91b12-92a5). Chapter 6 gets even with some more ineffective attempts to 'prove' that definientia actually apply to something.

#### 6. 54 *The vital distinction between δεικνύναι and ἀποδεικνύναι*

In chapter 7 the problem is addressed from another angle, by examining how precisely the investigator will go about applying a definiens. In fact, the intention of the entire chapter is to elucidate the difference between genuinely proving (ἀποδεικνύναι) and disclosing or exhibiting (δεικνύναι).<sup>327</sup> At the same time, Aristotle appears to play on the difference between the definiens taken as an unapplied phrase or (incomplete) dictum and the definiens as actually applied by the definer to something given. So far neither of these distinctions have been given due attention, I am afraid.<sup>328</sup>

<sup>326</sup> I.e. using the qua-functor; in Aristotle's words (91a21): διπλώσας.

<sup>327</sup> Ackrill (1981a, 365; 1981b, 101) rightly distinguishes between two types or grades of knowledge, the strong and the weak, when it comes to telling apart ἀποδεικνύναι and δεικνύναι with reference to the problem whether a definition can be genuinely 'proved' or merely 'exhibited'. The older commentators, who like Maier and Solmsen argued for a view of the provability of the definition in *Top.* different from that of *APo.*, systematically ignored the telling difference between δεικνύναι and ἀποδεικνύναι.

<sup>328</sup> The present issue runs remarkably parallel to the way in which the

How will the definer disclose a thing's being or what-it-is (τὴν οὐσίαν ἢ τὸ τί ἐστὶ), Aristotle asks (92a34-35). Not by making it clear from what is agreed to be the case; for that would happen by an *apodeixis*, and in the course of this chapter it will be made patently clear that any such attempt is bound to produce a begging of the question. Nor can the definer attain this end by proceeding through particular instances (which would be an inductive argument); for this would say nothing about a thing's quiddity, and merely state that there are more things of that sort. From Aristotle's words it is plain that he is speaking of the examination of a concrete situation in which one is about to define some given thing quidditatively, saying 'what-it-is', not of presenting something's definition on a theoretical level. In other words, to define something comes down to identifying some given thing quidditatively, according to its quiddity (τί ἐστὶ), that is.

What other way then remains for the definer to justify a definition? Given that no proper proof is practicable,<sup>329</sup> you can imagine why Aristotle sees this as a good question,<sup>330</sup> for the definer can hardly appeal to sense-perception or use his finger, saying 'look, there is another one!' (92a35-b3).

How will the definer do his job then? The job is not unimportant, since he who is familiar with the quiddity of 'man' or anything else must also be aware that the definiens does actually apply to something. For concerning what is not, nobody is aware of what<sup>331</sup> it in fact is. True enough, one may apprehend what the definiens or the bare name signifies when e.g. I say 'goat-stag', but it is impossible to be aware *what* a goat-stag actually is (92b4-8).

Subsequently another indisputable (ἀλλὰ μὴν)<sup>332</sup> point is brought forward (92b8-11): But surely, the argument runs, supposing the

distinction between an applied and unapplied dictum (or rather 'assertible') has been ignored by the commentators so far, e.g. with regard to some basic controversial matters in *Int.*

<sup>329</sup> To keep using the technical term 'prove' (Ross, Barnes; 'prouver' Tricot; 'beweisen' Detel), while ignoring Aristotle's explicitly contrasting δεικνύναι and ἀποδεικνύναι, inevitably sets the reader on the wrong track. Indeed Aristotle recognizes no other 'proofs' apart from deduction and induction. *APr.* II 23, 68b13-14; *EN* VI 3, 1139b26-28.

<sup>330</sup> A question with τίς often amounts to a strong negation; see Liddell & Scott s.v. B 5.

<sup>331</sup> Reading with Ross ὅ τι ἐστὶν instead of the common reading ὅτι ἔστιν. One should notice that, as the phrase τὸ μὴ ὄν corresponds to the preceding ὅτι ἔστιν, so ὅ τι ἐστὶν matches τὸ τί ἐστὶν at 92b4-5.

<sup>332</sup> For ἀλλὰ μὴν being used to allege something not disputed see Plato, *Thaet.* 187A7; Liddell & Scott s.v. μὴν.

definer is to disclose a quiddity *and* actually apply it, there will still be the question, How should he do this by one and the same account? For definition makes only one thing clear, and so does epistemonical proof, each their own thing. Now a man's quiddity and its actually applying are still two different things.

Aristotle's claim (92b4-5) to the extent that he who is familiar with *what* a thing is must be aware *that* it is, can easily be misunderstood. Thus Barnes takes (205; 1994, 215) it to mean that "if A knows what X is, then A knows that there are X's", meaning that he knows that 'X' does not stand for an empty class.<sup>333</sup> But Aristotle's use of 'goat-stag' (which, no doubt, refers to an empty class) should not lead us astray. This drastic example is only adduced by Aristotle to make his point as convincingly as possible,<sup>334</sup> viz. that to be familiar with a certain quiddity is not the same thing as to be aware that there actually is an instance of that quiddity; this can indeed best be illustrated by using an empty concept. So what Aristotle wants to make clear is that in any argument it is required that, when you adduce a definiens, you should point to something which actually possesses the quiddity expressed by the definiens; otherwise your putting forward a certain quiddity serves no purpose. Once again, what counts is the difference between presenting a definitorial phrase and actually applying it to something.

On this interpretation, the question of the supposed 'existential import' can easily be answered. Aristotle does not mean that any definition (whether 'nominal' or 'real', using a later, rather inappropriate terminology) has *as such* (qua formula, that is) existential import. What his remark at 92b4-5 is all about is that you should not use a definitorial phrase (and not a single name either) without applying it to the components (viz., substrate or attribute) making up the dictum of the thesis (προκειμένον) put before you. For example, if you are to 'prove' the thesis 'that this tympanum here is 2R' you need not (and cannot, for that matter) 'prove' that this tympanum qua mathematical figure is a triangle, i.e. must be defined as 'something being a triangle'); you should only *identify* this thing, which is existent here and now, as an actual instance of 'triangle'. Otherwise,

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<sup>333</sup> For the interesting issue underlying this and other interpretations of the 'that-it-is' question see below, my section 6.56 *ad fin.*

<sup>334</sup> Likewise at *Int.* 1, 16a15-17 the goat-stag example is not only representative of such fabulous things as goat-stags and chimeras, but is used because it most clearly makes Aristotle's point.

the proof of the thesis cannot get off the ground. Evidently to 'prove' that the definition applies would not be possible without engaging yourself into begging the question, viz. by 'proving' that the substrate really is a triangle, because the sum of its interior angles really is equal to two right angles, which would in fact boil down to making use of the demonstrandum.<sup>335</sup>

Following his remark (92b12-15) that (a) for everything, apodeixis is required to prove that it is such-and-such a thing (ὅτι ἐστίν), unless being so-and-so belongs to its quiddity,<sup>336</sup> but that (b) being really the case does not belong to anything's quiddity, Aristotle continues to say that the difference previously stated between a thing's quiddity and its actuality also comes to the fore in the ways the disciplines proceed in practical matters. The geometrician, for instance, already has the triangle's quiddity ('what "triangle" means') in his stock-in-trade, and now points out that there is an instance of it in actuality (say, this tympanum, taken as a mathematical figure). Now of what other<sup>337</sup> than the triangle will the definer exhibit what it is? For it is impossible that the definer should be familiar with a thing's quiddity, without being aware *that* it is:

*Ibid.* II 7, 92b12-18: Next, we hold that of everything it must be by epistemonik proof that its being what it is (ὅτι ἐστίν)<sup>338</sup> is shown, unless this is its very quiddity. — But being given is not anything's quiddity; for being given is not a kind of being.<sup>339</sup> — So the '*that* something [i.e. some state of affairs] is' will be the object of

<sup>335</sup> Cf. *Met.* M 10, 1086b32-37; my section 11.55 in Vol. II.

<sup>336</sup> E.g. that a man is a man needs no proof.

<sup>337</sup> Reading τί ἐστίν ἢ at 92b17 as 'what else ... than'. For this sense cf. Plato, *Crito* 53E5; Kühner-Gerth II 2, 304, n. 4. Ross (627) is right that the common reading with the question mark right after τί ἐστίν gives no good sense, but his changing the word order (putting ἢ before τί ἐστίν) does not make things any better.

<sup>338</sup> This formula bears on a thing's being in the broad sense, including any mode of being.

<sup>339</sup> *Met.* B 3, 998b22-27. Aristotle means to say that 'being given' or 'hyarctic being' always includes 'being such-and-such', and is thus not generically prior to 'essence'. Any instance of being given *eo ipso* represents this or that of the ten categorial modes of being (*Cat.* 4, 1b25-27). — The counterpart of this basic view is that 'connotative being' is included in any quiddity, and thus is said of everything (cf. *Top.* IV 1, 121a17-19 and b6; *Met.* Z 16, 1040b16-24; H 6, 1045b1-7; my section 1.64). When he complains (206; 1994, 215) that it is not clear how Aristotle could reconcile the view that *being* is said of everything and thus cannot differentiate one set of things from another (cf. e.g. *Top.* IV 1, 121a18 and b6; *Met.* Z 16, 1040b16-24; H 6, 1045b1-7) with his remark that goat-stags do not exist, Barnes muddles connotative and strong hyarctic 'be', which is perhaps partly due to his taking the Greek notion 'bè' (εἶναι) in terms of 'existence'.



epistemoni proof. This is precisely how the disciplines in fact proceed. For the geometrician assumes what 'triangle' signifies, and exhibits<sup>340</sup> that there is an instance of it.<sup>341</sup> Now of what other than the triangle <at hand> will the definer exhibit its quiddity? Will one then, while being familiar with its quiddity, be unaware of whether it is an instance of it? Come on, this is impossible.

This view about defining in terms of quidditatively 'identifying' something present is, I take it, deeply rooted in Aristotle's basic ontology of immanent forms. There is no quiddity but enmattered here and now. Therefore to *exhibit* (δείξει) a quiddity or 'what-it-is' is inconceivable without pointing out the substrate (the *it*, so to speak) in which it is instanced.

Two more arguments are adduced by Aristotle in support of his view, one from the methods of defining now being used, the other rebuking the idea that the definer should use definitions as merely explaining names, without referring to their instantiations and instances.

The first argument runs as follows:

*Ibid.* II 7, 92b19-25: It is evident that, in the current methods of defining, those who define <something> are not showing (δεικνύουσιν) that it exists. Even supposing that 'something-equidistant-from-the-centre' is, owing to what should that which is defined (τὸ ὁρισθέν) exist? And owing to what is that thing<sup>342</sup> a circle? For one might just as well assert that it satisfies the definiens of mountain-copper. Definitions indeed do not, in addition <to the essence>, reveal that it is possible for what is conveyed by the definiens (τὸ λεγόμενον)<sup>343</sup> to exist, nor do so for the object they claim to define. It is always possible to ask the 'owing to what?' question.

<sup>340</sup> I am using, here as in the present discussions, 'exhibit' in its special sense of 'submitting for consideration'.

<sup>341</sup> Ross rightly rejects Mure's suggestion to change ὅτι δ' ἔστι (at 92b16) into ἐστὶ τί (*Oxf. Transl. ad loc.*, n. 4 "[...] in that case ὅτι δ' ἔστι should mean not 'that it exists', but 'that it has some attribute'. [...] It is tempting to read ἐστὶ τί"), since this would destroy Aristotle's argument. However, Mure has rightly seen, I think, that Aristotle has a constant habit of taking loose terms (such as 'triangle', 'thunder', as well as 'man' or 'animal') to mean not just a 'thing' (whether or not a proper substance), but rather in the sense of 'there-being-some-[x]-which-is-an-/ (viz. a triangle, or man etc.). Barnes's interpretation (1991, 55, and elsewhere) of the εἰ ἔστι device ('whether triangles exist' = 'whether there are such things as triangles') is pointless, since Aristotle is not talking about existence in general, as if he intended to rule out the use of terms signifying an empty class. Barnes's (unidiomatic) rendering (first edition, 61) 'that it is' could be given the benefit of the doubt.

<sup>342</sup> I.e. the definiendum or object under demonstration. Note that the above-mentioned definiens roughly refers to 'circle'.

<sup>343</sup> Τὸ λεγόμενον, literally 'that which is said', must refer here to the definiens, i.e. the essential definitorial content of the expression.

By the way, a similar combination of τὸ λεγόμενον and the τί ἐστὶ question is found as early as in the opening chapter of the first Book (I 1, 71a12ff.) where the author discusses the requirement of some kind of previous knowledge. This initial awareness may be, he argues, either some belief that a state of affairs is the case (ὅτι ἔστι), or some grasp of what is meant by the name or phrase used (τὸ λεγόμενον), or of both at the same time. He instances this in the subsequent lines:

I 1, 71a13-16: For example, <of the rule> that everything is either affirmed or denied truly, <one must believe> that it applies<sup>344</sup>; of 'triangle', that it has *this* meaning; and of 'unit', both, viz. both what it signifies and that it *is* [i.e. that there is here and now an instance of it].

The other argument (92b26-34) aims to show that in matters of the existential import of the act of defining one cannot sustain the current view of definition. Given that the definer exhibits either a 'what-a-thing-is' or what its name means, we can argue as follows. Supposing that to define an object is not to exhibit its actually being (as Aristotle claims it is), then any definition will merely be a phrase signifying the same as the name does. But this is absurd, Aristotle argues. Two reasons are advanced.<sup>345</sup> Firstly, it is possible to frame definitions of non-subsistent things (μὴ οὐσιῶν); moreover of things that are not (καὶ τῶν μὴ ὄντων) — because it is also possible to *signify* things that are not. Obviously, Aristotle cannot mean to say — as the standard paraphrase of his words runs — that there would even be definitions of non-existents, as though this were a serious problem to the adherents of the usual method. As a matter of fact, they have no reason at all to reject such definitions. Hence it is better to paraphrase his words thus: given the fact that on their view non-existent things too can be defined, those definers can never distinguish between defining existent and non-existent things.

The other reason is of a practical nature. Any 'more-than-one-word' expression (λόγος) would feature as a definiens by merely assigning a name to it (e.g. the twenty-four books making up what we

<sup>344</sup> Lit. 'that it is the case'.

<sup>345</sup> Our MSS present a third one at 92b32-34. Serious doubts can be raised not only about the soundness of different MSS readings (see Ross, 627) but also about the position of these lines in our text, since it lacks good sense in the present context. To my mind, the lines 92b32-34 naturally suit the previous argumentation at 92b19-25: "Again, no epistemonik proof could *prove* that this or that name refers to this or that thing; therefore (τοίνυν) neither can a definiens, in addition to its definitorial task". I think it is better to put these lines right after 92b25.

have called the *Iliad* would be its definiens) and we would all be talking definientia by merely covering a complex of various events by just one name (say, 'my story').

The chapter winds up with a succinct summary of chs. 3-7 (Ross, 626): (a) definition and epistemoni proof are not the same thing; (b) their objective contents do not coincide; (c) the definitorial formula (unlike the definer, when actually applying a definiens, it should be borne in mind) neither proves nor exhibits anything; and (d) to become familiar with a thing's quiddity is not brought about by a definitorial formula or by an epistemoni proof.

This chapter is commonly regarded as 'dialectical' or 'aporematic'. Ross (626) is even of the opinion that it was written by Aristotle "apparently to clear his own mind on a question the answer to which was not yet clear to him". Barnes thinks (207) that the arguments of this aporematic chapter, aporematic as it is, should not be pressed. It is true that this impression is given some confirmation by the opening lines (93a1-2) of the next chapter, where Aristotle proposes to reconsider the previous arguments. However, the question whether or not these arguments are 'well said' (λέγεται καλῶς), should not rashly be taken to bear on the degree of validity. As will be clear from the next few chapters, the καλῶς means 'deservedly' or 'appropriately'.<sup>346</sup>

The line of argument of the present paragraphs continues the discussions of chs. 3-6 in a substantial manner, but now differentiates the previous claims with more precision (καλῶς). The main puzzles which seem to come into view at the beginning will disappear, if we pay serious attention to Aristotle's phraseology, to wit (1) his contrasting δεικνύναι ('exhibit') with ἀποδεικνύναι ('prove'), and (2) his implicit distinction between the unapplied definitorial formula (so to speak qua lexicographical unit) and the definiens as applied by the investigator, who when preparing the proper epistemoni syllogism, is identifying the substrate or the attribute quidditatively by applying a suitable definiens.

The main outcome of this chapter will be that in the preparatory stage of the epistemoni proof, only indemonstrable starting-points feature. To begin with, the procedure of disclosing the appropriate 'middle' (τὸ μέσον), viz. defining or identifying a thing as 'precisely such-and-such', is something quite different from ἀπόδειξις. Besides,

<sup>346</sup> Likewise at II 19, 100a14-15, Aristotle proposes to say again what was just said, but not said clearly (οὐ σαφῶς). At PA I 1, 639a4-6 an educated man is said to be able to judge successfully what is properly (καλῶς) expounded, and what is not.

the definitorial formula itself is not of much help either when it comes to finding your stepping-stone in the real domain, because by itself this formula has no existential import. The link with the outside world, which is the proof's real starting-point, is not accomplished until the definer goes on to apply a definiens expressing a certain quiddity to something of the outside world (in fact, a kernel element of the *προκειμένον*), by identifying it quidditatively, i.e. as precisely 'what-it-is', so that the appropriate 'middle' can be produced to act as the mode of being mediating between the substrate and the intended attribute of the thesis to be proved (*προκειμένον*).<sup>347</sup>

Thus the chief purport of chapter 8 will be, I take it, to dot the i's and cross the t's, rather than to recant previous claims. Still, Aristotle's arguments are, as usual, not crystal clear, but his train of thought is well traceable.<sup>348</sup>

#### 6. 55 *What 'to define' comes down to*

After Aristotle has explained (II 5) his misgivings about seeking to 'prove' a definition (by the Platonic procedure of 'division' and otherwise), and has extensively discussed (II 7) the question of how a thing's quiddity is to be exhibited (*δείκνυσθαι*, not 'proved', *ἀποδείκνυσθαι*), he now goes on (II 8) to sketch the epistemonik procedure (*ἀπόδειξις*).<sup>349</sup> The observations are centred around the question what defining comes down to, and whether there can be, in a sense, talk of 'proving' and defining a thing's quiddity, or in no way at all (93a2-3).

First, the author repeats (from chapter II 2, 90a14-15 and 31-32) the claim that to know *what* something is and to know the explanation of whether it is actually given come down to the same thing. That is because a thing always has some ontic cause (*αἷτιον*)<sup>350</sup>, either

<sup>347</sup> At the very beginning of *APo.* (I 1, 71a8-9) inductive arguments are described as 'exhibiting' (*δεικνύοντες*) the universal through the particular's being clear. The clarity of the particular must be taken to consist in its clearly being an instance of the universal. It is as such that it can be defined and identified.

<sup>348</sup> *Pace* Barnes's verdict (in his first edition, 208): "The argument is tortuous, and I can find no way of extracting a single train of reasoning from it". An interesting survey of the numerous discussions this passage has evoked from Philoponus up to our days is found in Detel II, 625ff. In his revised edition Barnes (1994, 217) confines himself to calling this chapter "excessively difficult" and mentioning the considerable body of literature it has amassed since 1975.

<sup>349</sup> See also Guthrie (1981), 175-8; Ackrill (1981), 99f.

<sup>350</sup> To render here 'explanation' (Barnes) seems to be less appropriate.

identical with it (i.e. its proper quiddity), or distinct from it; and if it is something distinct, then it (i.e. the substrate including the distinct attribute)<sup>351</sup> is either demonstrable or not-demonstrable. Now, if this cause is a distinct, demonstrable one it must be a 'middle', and, then, it can be exhibited (δείκνυσθαι)<sup>352</sup> in the first syllogistic figure (for what is being exhibited is universal and affirmatively expressed). The author first (93a5-6) contrasts the ontological status of a subsistent substrate possessing its proper complete form (εἶδος) as an immanent cause with that of any one of its attributive (whether essential or non-essential) modes of being; then, speaking about the syllogistic first figure proof, he points out (93b6-9) that the 'middle' or the mode of being mediating as an explanation between substrate and attribute is preferably exhibited in the first figure.

*APo.* II 8, 93a1-9: We must now review which of these points is aptly (καλῶς) argued and which is not; and what definition is; and whether there is in a sense proof and definition of a thing's quiddity, or in no way at all. Since, as we said [ch. 2], to be acquainted with (εἰδέναι) a thing's quiddity and with the 'because' of whether it is coincide — the argument for this is that something is the 'because', and this is either the thing itself or some other thing (ἄλλο), and if it is something else it is either provable or non-provable (ἀναπόδεικτον) — if, then, it is something else and it is possible to prove it, it is necessary for the 'because' to be a middle and to be exhibited (δείκνυσθαι) in the first figure; for what is being exhibited is both universal and affirmative.

For example,<sup>353</sup> when the thesis 'this man is sensitive' is to be epistemically proved, the following apodeictic syllogism may be framed, using 'being an animal' as 'middle':

'Every animal is a sensitive being;  
Every man is an animal;  
therefore every man is a sensitive being';

<sup>351</sup> The 'middle' — which is an incomplete dictum — is neither demonstrable nor undemonstrable. Tredennick elegantly escapes the difficulty by taking the expression to stand for 'serviceable for demonstration' (201, n. c).

<sup>352</sup> Not: 'proved' (Tredennick; cf. Barnes *ad loc.*), the 'middle' being a means to demonstrating, which is not itself demonstrated; see my previous note.

<sup>353</sup> What follows has been inspired to a considerable extent by the pertinent comments upon Aristotle's epistemonik procedure made by John Ackrill (1981a, 360ff. and 1981b, 94-106). — Incidentally, for the sake of convenience the deductive procedure is presented in the form of an inference scheme, not as an implication, as is found in *APr.* It should be recalled that fully-fledged syllogisms as dealt with in *APr.* are not found in *APo.*; Barnes (1981), and (1994), 82f.

this universal affirmative conclusion is then applied to the initial thesis by using the qua-locution:

‘This man qua animal is a sensitive being’.

The cause under examination (‘being an animal’), which, although it is a quidditative component of ‘man’, is not-identical (ἄλλο) with the quiddity of the substrate (‘man’), can be exhibited as a correct appellation of the substrate. Hence in the proof it can act as the mediating mode of being between the substrate and the attribute, and serve as middle term of the syllogism.

One way to proceed, Aristotle continues (93a9-16), may be the one recently examined (ch. 4, 91a14-b11), viz. to exhibit a thing’s ‘what it is’ through something else. For the ‘middle’ must then be a quiddity among the <other> quidditative components, and peculiar to the peculiar elements; hence of the essential components of one and the same object perceived (πρᾶγμα) you will exhibit one without exhibiting others (93a11-13). Aristotle means to say by this rather concise manner of expression, I take it, that while one and the same entity (which is in fact, say, Cleon) has a whole cluster of essential components<sup>354</sup> (‘man’, ‘animal’, ‘living being’, ‘body’ etc.), one of which is the ‘middle’ (‘viz. being an animal’) that you need to prove the thesis ‘This entity is a sensitive being’, you will exhibit the quidditative element ‘being an animal’ by ignoring (‘not-exhibiting’) the others, since they have no bearing on the intended proof. That this will not procure an epistemonical proof (ἀπόδειξις), Aristotle goes on to observe (93a14), was already said earlier (91b10); it is in fact rather a logical deduction<sup>355</sup> concerning the thing’s quiddity (93a15).

Next Aristotle proposes to make a fresh start and to explain in what way an epistemonical procedure is at all possible; all things considered (we might think him to mean), this will be the best way to clear up the embarrassment one might have regarding the notions of ‘defining’, ‘exhibiting’, and ‘proving’.

In fact, when one has a sensation of some complex (as yet unidentified) phenomenon, one has to discover a proper categorization of its substrate through which one can lay one’s hands on the hard kernel of the phenomenon. So the procedure required substantially amounts to proper focalization and categorization. Let Aristotle be

<sup>354</sup> They are indicated at 93b13 as ‘the accounts remaining besides’ (παράλοιποι λόγοι), which are as many possible alternative definientia.

<sup>355</sup> Barnes (208).

his own spokesman, and let us try to understand his words along the lines of the previous discussion:

*Ibid.* II 8, 93a16-20: Just as we seek the 'through what' (τὸ διότι) when we are sure of something's being the case (τὸ ὅτι) — (sometimes indeed they become clear together, but it is not possible to become familiar with the 'through what' *before* 'the fact that') — clearly likewise <our being familiar with> a thing's quiddity does not happen without <our being aware> that it is instanced (ὅτι ἔστιν). For it is impossible to be acquainted with (εἰδέναι) [*x*] 's essential nature if we are ignorant of whether [*x*] is an instance of it (εἰ ἔστιν).

In keeping with earlier discussions (II, 1-2), the τί ἔστιν (τί ἦν εἶναι) device is paralleled to διότι, as ὅτι ἔστιν is to the εἰ ἔστιν device, on the understanding that the ὅτι ἔστιν at a20 should be taken as the answer to the εἰ ἔστιν question, as is evident from the next explanatory sentence ("no 'what-it-is' without 'whether-it-is'"). The first parallel is the more understandable, as some lines earlier (93a3ff.) Aristotle has explicitly put the 'identical' and the 'distinct' causes on a par.

The other parallel, viz. between 'a state of affairs in which a substrate is involved' and 'the substrate or attribute quidditatively identified', may seem remarkable on the face of it. Evidently, this parallel is drawn between the complete dictum 'that-some-state-of-affairs-is-the-case' (being the first of the items of inquiry mentioned at 89b24-25) and the (answer to the) third one, viz. the incomplete dictum, which in fact merely contains a rephrasing of the substrate's (or-attribute's) essence, by identifying it as being-an-instance-of-a-certain-quiddity, a quiddity, indeed, that is more up to the job of mediating between the initial attribute or substrate, respectively. For instance, in order to prove that this tympanum<sup>356</sup> is 2R, you should rephrase the substrate by identifying it as a triangular figure, since this mode of being is commensurately related to the attribute 'being 2R'. Or, taking an example of rephrasing an attribute, the proof of the moon's being eclipsed must proceed by rephrasing 'being eclipsed' as 'being screened by the earth'.<sup>357</sup>

<sup>356</sup> *APo.* I 1, 71a14ff. and *passim*; II 3, 91a3ff. and *passim*. By the way, Aristotle uses the example of an isosceles or scalene, or a triangle actually inscribed in this or that semicircle. In order to make clear that for Aristotle, too, concrete objects are under discussion, I prefer an example of an unquestionably concrete entity, like a temple's tympanum, to avoid any idea that Aristotle should have an epistemonomic procedure concerning abstract entities in mind.

<sup>357</sup> *APo.* I 31, 87b31ff.; II 2, 90a7; 8, 93a30ff., and *passim*.

Thus the stage of defining, i.e. presenting a 'what-it-is', which, like the preliminary stage of any epistemonical proof, is directed to finding the appropriate 'middle', is concerned with identifying the substrate's (or attribute's) mode of being that must be focussed on in order to accomplish the proof properly. Whitaker rightly takes<sup>358</sup> the procedure of defining in terms of identifying the object. But he is wrong in understanding this identification as *establishing* the actual existence of the definiendum, instead of taking it as stating that the definiendum (whose actual existence is not questionable at all) is an instance of the mode of being signified by the intended definiens. In other words, the point at issue is not that if the attribute 'being 2R' is under examination, the investigator should be sure of the existence of, say, this mathematical figure (represented by e.g. this temple's tympanum in front of him), but that he is able to identify the object as actually satisfying the appellation 'triangle', or its definiens. Whitaker describes the problem of *APo.* II 7 and Aristotle's solution to it as follows (214):

Aristotle thus has the dilemma that demonstrations that something is the case can only begin if there is previous knowledge of definitions, and definitions cannot be sought for without knowledge that the *definienda* exist, which can only be established by demonstration. Definition and demonstration threaten to form a closed circle, where each can only be undertaken after the other. The solution to this problem is ingenious. Demonstrations are possible because of some preliminary grasp of the definition, which is confirmed by the demonstration: although the definition only demonstrates *that* the *definiendum* exists, we nevertheless learn simultaneously *what* it is. This theory of simultaneous discovery avoids the problem of circularity.<sup>359</sup>

However ingenious this solution may seem, it is surely not Aristotle's, as the dilemma sketched by Whitaker is not Aristotle's either, as may appear from our previous discussion. The remainder of chapter 8 makes it patently clear that in fact no existential claim whatsoever is in order, but merely the correct categorization of a given object.<sup>360</sup>

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<sup>358</sup> Whitaker (1996), 213f.

<sup>359</sup> Cf. Whitaker's account of the procedure *ibid.*, 219f.

<sup>360</sup> There is a widespread mistaking — to my knowledge, Gómez-Lobo (1980) is the only exception — the *ὅτι ἔστιν* formula to be concerned with the question whether 'there are such things as *F*-things, *G*-things etc.', as if the investigator must be certain that such things are in existence. See e.g. Barnes ad *APo.* II 1, and *passim*; Bolton (1976), 515-7; 521; 538. McKirahan too (1992, 122-32; 188-97) takes the *εἰ ἔστι* device in terms of a general existence claim; likewise Goldin (1996), against Gómez-Lobo. See my sections 6.51 and 6.57.



In the subsequent lines, the procedure of rephrasing terms ('re-appellating' things) is taken into consideration from the viewpoint of the initial phenomenon (ὅτι ἔστιν) as it is presented to us by sense-perception. We may have become aware of it in two ways. Either this happens through a coincidental mode of being of the substrate underlying the phenomenon (κατὰ συμβεβηκός), or by grasping one of its essential features. In the first case, we are not in any position to grasp the quiddity of the underlying substrate, because we are not even aware that it is such-and-such quidditatively. But in the other case things are much easier. Therefore the extent to which we are aware of the fact that the quiddity is instanced in the substrate, parallels the way in which we have grasped its 'what-it-is':

*Ibid.* 8, 93a21-29: Now as to whether it is the case,<sup>361</sup> sometimes we get hold of it coincidentally [i.e. by means of a non-essential appellation; κατὰ συμβεβηκός] and sometimes by grasping something belonging to the thing itself (αὐτοῦ τοῦ πράγματος), e.g. of 'thunder', that it is a sort of noise in clouds;<sup>362</sup> or of an eclipse, that it is a sort of privation of light; and of man, that he is a kind of animal, and of mind, that it is something moving itself. Now in cases in which by means of a non-essential appellation we are aware that something is the case, inevitably we have no hold on <the substrate's> essential nature, for we are not even aware that it is actually an instance of it, and to inquire such a thing's quiddity without grasping that it is actually an instance of it, is to seek nothing. But in the cases in which we grasp something, it is easier. Hence in the way in which we are aware that it is actually an instance <of a certain quiddity> (ὅτι ἔστιν), in just the same way we have cognition regarding its 'what-it-is'.

As usual, the phrase κατὰ συμβεβηκός ('coincidentally') refers to the incidental mode of being according to which something is brought up for discussion (e.g. by calling up Callias 'the educated'), not to a thing's coincidental mode of being as such.<sup>363</sup> The alternative way with which the coincidental mode is contrasted, viz. 'to grasp something belonging to the thing itself', is clearly concerned with some quidditative element of the thing under discussion, though not its

<sup>361</sup> On purpose I use the ambiguous expression 'is the case', leaving aside whether the subject is a thing including all his modes of being (πράγμα) or just the substrate (ὑποκείμενον).

<sup>362</sup> The same example of a partial definiens indicating merely a part of a thing's quidditative nature (called here "something of the thing itself") is found at 94a7-8.

<sup>363</sup> For this use of κατὰ συμβεβηκός see De Rijk (1980), 26-33, esp. 31, n. 31; Barnes (99; 1994, 95 re *APo* I 2, 71b28-29), who rightly remarks that in this case 'non-incidentally', despite the word-order, goes with the verb; cf. Kirwan (200, to *Met.* E 4, 1028a2); see also my *Index* s.v. What is usually expressed by the phrase καθ' αὐτό is in the next line indicated by 'grasping the thing itself'.

complete nature. So the eclipse is brought up as ‘a sort of privation of light’, not more precisely as ‘that privation of light caused by the earth’s screening’. Now when we call up something by a coincidental appellation, e.g. by calling an eclipse ‘something terrifying’, we get no hold on its ‘what-it-is’,<sup>364</sup> because we are not even aware that in this phenomenon the quiddity looked for is instantiated. By the way, this passage makes clear once more that the *ὅτι ἔστιν* phrase does not bear on the fact ‘that there are some such things as [*x*]s’ (Barnes *passim*), meaning that [*x*] does not belong to an empty class. The *ὅτι ἔστιν* must concern the quiddity’s actually being applied to the (components of the) phenomenon, or the identification of one of its components (its substrate or attribute) as an actual instance of the intended quiddity.<sup>365</sup>

Aristotle gives an example of a subject the essential nature of which we do have some inkling:

*Ibid.* 8, 93a29-33: So in cases in which we grasp something of what the thing is, let it be first like this: ‘there-being-a-<moon>-eclipse’ (=A), ‘there-being-the-moon’ (=C), and ‘there-being-a-screening-by-the-earth’ (=B). Then <to inquire> whether the moon is eclipsed or not is to seek whether B is the case or is not the case. And this is the same as to inquire whether the definiens applies (εἰ ἔστι λόγος αὐτοῦ);<sup>366</sup> and if this (τοῦτο, viz. B) is the case, we assert that that (κάκεινο, viz. A) is also the case.

A similar ‘either-or’ situation is then brought up (93a33-35) by the favourite example of the 2R property: “Of which of the contradictory

<sup>364</sup> We should constantly bear in mind that this (whether essential or non-essential) quiddity is precisely the object’s mode of being that will act as the ‘middle’ of the epistemonical proof.

<sup>365</sup> The adherents to the common view of the εἰ ἔστιν device should be concerned about Aristotle’s (putatively) claiming (93a24-26) that in cases in which we are aware (οἶδαμεν) of something’s ‘existence’ incidentally, [...] we are not even aware (the same verb is used: ἴσμεν; cf. the repeated εἰδέναι at 93a4) that it is. As a matter of fact, Ross’s helpful comments on 93a15ff. (630-2) are obscured to some extent by his misconceiving the *ὅτι ἔστιν* device. He thinks (630) we have incidental knowledge of something if “we have inferred it to exist because we know something else to exist of which we believe it to be a concomitant”. Barnes (209; 1994, 219) rightly rejects this interpretation, since the notion of inference is absent from the text. But Barnes’s own idea of a sort of ‘definitorial demonstration’ is not satisfactory either. See below, my note 369.

<sup>366</sup> The rendering “whether there is an account of the eclipse; and if there is, we say that it [the eclipse? the account? De R.] is eclipsed” (Barnes 1994, 57) is pointless. Time and again, what Aristotle is trying to say is plain to see if one realizes that the critical issue throughout is whether or not the definiens acting as ‘middle’ is satisfied by the substrate or attribute when brought up by the suitable (‘commensurately applying’) appellation.

pair does the dictum hold<sup>367</sup> — of that running ‘that [*x*] is 2R’ or its counterpart ‘that [*x*] is not 2R?’”, speaking e.g. about the problem whether to a certain thing [*x*] the property of having the sum of its angles equal to two right angles belongs.

Thus the definiens acts as the ‘middle’ for proving that the initial phenomenon presented by sense-perception (‘the moon’s disappearance’) is an eclipse of the moon caused by a screening by the earth. So the appropriate procedure has afforded an epistemonik description of the phenomenon which *eo ipso*<sup>368</sup> includes its cause (explanation).

After Aristotle has illustrated this procedure in some more detail (93a35-b14),<sup>369</sup> the chapter winds up with a summary. It should be noticed that the ‘exhibition’ of a thing’s essence is most explicitly marked off from deductive apodeictic proof. The essence’s exhibition takes place, it is claimed, *in the course of*, and not *by means of* the deduction:

*Ibid.* 8, 93b15-20: We have stated, then, how a thing’s ‘what-it-is’ is apprehended (λαμβάνεται) and becomes familiar (γίνεται γνωρίμον). Hence although no deduction and no epistemonik proof of its ‘what-it-is’ comes about, none the less it becomes clear (δῆλον) in the course of the syllogistic epistemonik proof. It follows that without proof you cannot become aware (γινῶναι) of the essence of a thing that has a cause other than itself, and yet there is no proof of a thing’s quiddity, as we said when we went through the puzzles.<sup>370</sup>

In keeping with his opposing δειξις to ἀπόδειξις, Aristotle uses a battery of synonyms for the notion of ‘becoming aware’, but seems to

<sup>367</sup> Reading ἔστιν instead of the atonic ἐστιν.

<sup>368</sup> *Eo ipso*, for the τί ἐστι and the διὰ τί ἐστι come to the same thing; see II 2, 90a14-15 and 31-32; 8, 93a3-4, where the διὰ τί is paraphrased τὸ αἷτιον τοῦ εἶ ἐστι. As a matter of fact, a thing’s quiddity is its cause; see 93a5ff.

<sup>369</sup> Barnes’s detailed discussion (first edition, 208-11) of this section suffers somewhat, I am afraid, from his tacit assumption that it is about what he calls ‘definitional demonstration’. But, quite in line with the previous chapters, Aristotle certainly does not have any ‘demonstration’ (ἀπόδειξις) of a definition in mind, but merely the exhibiting (δειξις) of a thing (substrate or attribute) as being identifiable as an instance of the quiddity expressed by the definiens. I can, however, go the whole way with Barnes (211: “the definitional demonstration has at most a formal interest; it is, perhaps, the vehicle for exhibiting essences, but it is not the means to finding them”), provided the idea of putting δειξις (‘exhibition’) and ἀπόδειξις (‘demonstration’ taken as ‘epistemonik proof’) on a par is abandoned, and ‘exhibiting essences’ is taken to stand for ‘identifying something as actually satisfying the definiens’.

<sup>370</sup> Cf. *APo.* I 2, 72a1-8. Also *Met.* Γ 6, 1011a1-11, where it is argued that the starting-points of epistemonik proof cannot be obtained by proof: they are as obvious as our now being awake, and not asleep. Cf. Smith (1993), 269.

deliberately avoid the verb ‘to know’ (ἐπίστασθαι), since to obtain genuine knowledge is precisely a product of epistemonik proof, while exhibition suffices to point out that some quiddity is actually involved.<sup>371</sup> The concluding sentence (93b18-20) can only be understood within the framework of the previous discussions. What the author means to say is that when something is brought up by an appellation not expressing its very proper ontic cause (the τὸ αὐτό of 93a5), but some other (essential or non-essential) mode of being (the ἄλλο of 93a6), and, accordingly, its proper cause is not immediately exhibited, the thing’s τί ἐστί (= διὰ τί ἐστί) becomes familiar *in the course of* the epistemonik procedure, to wit when the definer, by means of a ‘logical deduction’ (93a15),<sup>372</sup> derives it from the other mode of being expressed by the initial appellation. For example, if a substrate is brought up under a certain appellation, say, ‘man’ or ‘white’, which does not properly suit the intended proof, the investigator can derive from it the appropriate one, ‘animal’ or ‘coloured’. However, it still is merely a formal deduction, not a proper proof, since the initial appellation, too, resulted from a mere δειξίς (‘exhibition’).<sup>373</sup>

#### 6. 56 *On definition, essence and existence*

The brief chapter 9 is deemed by Barnes (212f.; cf. 1994, 221) to be a “muddle” and its main content “the product of an Aristotelian confusion” (213; 1994, 223). Barnes’s own exposition is basically vitiated by his mistaken assumption that Aristotle is talking about sentences here (Barnes has ‘propositions’), whereas in fact the discussion is about appellations, i.e. the various ways in which things are brought up for discussion.<sup>374</sup> This misunderstanding makes him accuse Aristotle of

<sup>371</sup> Cf. Ackrill (1981), 364-70.

<sup>372</sup> Elsewhere this process is called μετάληψις (μεταλαμβάνειν), e.g. II 11, 94b21-23: “the definientia must be exchanged, and in this way everything will be more evident”. For the important semantic role of metalepsis see Whitaker (1996), 204-8; my section 4.25 and my *Index* svv. μεταλαμβάνειν and μετάληψις.

<sup>373</sup> Tredennick’s remark (*ad loc.*) that “although the essence or definition [read ‘definiens’ De R.] cannot be proved as the conclusion of a syllogism, yet syllogism enables us to see the facts in their true relation” misses the point.— Likewise at *EN* III 5, 1112b34-1113a2, identifying something as (a piece of) bread or stating that it is baked as it should be ἀρὲς said to be matters of perception.

<sup>374</sup> In a similar way Detel (I, 324ff.) misconceives Aristotle’s ὁρισμός in terms of sentence predication. Also Goldin (1996), who talks (e.g. 61) of “a true *proposition* (italics mine) reflective of reality”.

arguing “from the fact that some propositions are self-explanatory or immediate to the conclusion that some essences are immediate and hence principles; to say that the essence of *A* is immediate should mean that the *proposition* (italics mine) stating the essence of *A* is immediate.” But in this sense (II 8, 93a36), Barnes rightly infers, *all* essences are immediate. Should this not be a solid reason for any interpreter to reconsider the appropriateness of one’s taking Aristotle’s remarks ‘in this sense’?

On closer inspection, chapter 9 can be understood quite well in the light of the previous discussions. It links up immediately with the final part of the previous chapter. While at 93b18-20 things were spoken of that are brought up according to a cause other than their proper cause, in the present chapter (93b21-25) those which *are* appellated after their own proper being come up for a short examination. In the latter case the required definiens expressing their very essence is immediately given and in fact a starting-point; and then both their ὅτι ἔστι and their τί ἔστι must be assumed or made apparent in some other way; and this is precisely (ὅπερ) what, for instance, the arithmetician does; for he assumes both what a unit is, and that there is actually an instance of a unit. But, Aristotle continues (93b25-28), as for the things whose quiddity is not immediately given in the way in which they are initially called up, that is to say, for which something else is the cause of their being (τῆς οὐσίας), for those it is possible (as was said in ch. 8) to exhibit (δηλῶσαι) their essence *in the course of* the epistemonik proof, but not *by* such a proof (ἀποδεικνύντας). In fact, the text is reasonably clear:

*APo.* II 9, 93b21-28: Of some things there is something else that is their cause, of others there is not.<sup>375</sup> Hence it is clear that of essential natures, too, some are immediates and starting-points (ἅμεσα καὶ ἀρχαί), concerning which one must assume (ὑποθέσθαι), or exhibit in some other way, both that the state of affairs is the case as well as of

<sup>375</sup> This distinction is not about ‘things’ taken as such, but rather concerns things in so far as they are categorized through our various ways of naming. For instance, this particular tree is, ontologically speaking, a ‘thing that does not have something else as its cause, since it is in virtue of its proper formal cause’ (‘treehood’). But if we designate it as ‘this green thing’ the subject has its cause not in ‘greenness’ but in something else (‘treehood’). So the things that are not brought up as having something else as their causes are the ones that, owing to an essential categorization, are presented as ‘just what they are’. As far as the things of the outside world are concerned, the ‘things’ under discussion are substances. But Aristotle’s reckoning entities such as ‘units’ (μονάδες) among them is not out of the ordinary, because it is the way of naming that counts, not the subject’s ontological status as such.

what nature it is. (This is precisely what the arithmetician does; for he assumes both what the unit is and that there *is* an instance of 'unit'.) But as for things that have a middle and for which, accordingly, something else is explanatory of their being (τῆς οὐσίας), one can, as we have said, exhibit their essential nature *in the course of* an epistemonik proof (δι' ἀποδείξεως), but not *by accomplishing* such a proof (ἀποδεικνύοντας).

Barnes happily draws our attention to a significant point which "we may discern through this muddle" (212): chapter 9 hints at the distinction between primitive and derived terms, primitive terms being immediate in the sense that they are unanalysable. This significant point is indeed non-propositional and is concerned with appellation, not sentence predication. What in this and the previous chapters is under examination is precisely the things appellated by 'primitive' terms, expressing their 'what-it-is' immediately; these are contrasted with those appellated by a non-primitive term, which does not bring them up after the specific 'what-it-is' required for framing the epistemonik proof. For both groups the definition takes place by exhibiting that the definiens actually applies to the substrate or attribute, for one through μετάληψις, for the other without it.

Before embarking on Aristotle's exposition in chapter 10 of the different sorts of definition, it is useful to point out the divergent views held by the commentators with regard to the precise role of definition ('defining') in the (preparatory stage of the) epistemonik process.<sup>376</sup>

Bolton (1987, 140-2) follows a hint found in Philoponus (*ad loc.*) and rightly takes Aristotle to be concerned with diverse definitorial determinations of one and the same thing, but fails to elaborate this idea satisfactorily. Sorabji (1981, 216-9) at times seems to come rather close to the view argued for by the present author, to the effect that definientia serve for identifying things quidditatively. However, when he says (216f.) that the investigator "knows that thunder or lunar eclipse exists", Sorabji perhaps only joins the common view that there is no question of an empty class (217: "that instances exist", and 218: "only so long as instances of the thing defined exist (II 7, 92b5-8)"; and particularly, on pp. 218-9: "he knows in some sense that instances exist").

A similar oscillating view of what the applied definiens is all about is found in Ackrill's otherwise lucid exposition of the matter (1981,

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<sup>376</sup> The chief points of the immense and utmost controversial discussions from the Greek commentators onwards are reported in Detel II, 608-11.

101ff.; 1981a, 364-70), as well as in the observations in De Rijk (1990b). Charles (who nowhere explicitly mentions the εἰ ἔστι device) appears to take the 'existence' under discussion to be that of the particular phenomenon, e.g. when he says (1994, 45): "I may have thoughts about thunder or man providing I meet these conditions, and not yet know that the relevant kind exists. For I may not know what brought about these thoughts, or that there is one unified phenomenon that did so". On other occasions (*ibid.*, 39; 65; 72), however, his manner of speaking is unclear in this respect.<sup>377</sup> Detel II (606) is of the opinion that at 92b4-5 Aristotle has the 'existential import' of a definition in mind, which is also the view held by Barnes, *passim*; see above (p. 672, n. 329).

Of the earlier commentators, J.M. Le Blond claimed<sup>378</sup> that in *APo.* Aristotle hesitates between several different views of the role definition plays in science. In the first Book (I 1, 71a11-17; 2, 72a23; 10, 76b35) he seems to suggest that nominal definitions are 'principles of demonstration', and that demonstrations aim to prove the objectivity or truth — Aristotle says, more forcefully, the 'existence' — of these definitions, in the sense that 'existence' and 'essence' are grasped simultaneously. Elsewhere, however, Le Blond claims, Aristotle seems to say that we must start from an affirmation of existence ('jugement d'existence'), and proceed from that to a definition; for it is impossible to define a thing if you do not know that it exists (II 1, 89b34). To reconcile these two different aspects, Le Blond refers to *An.* I 1, 402a1-16, where it is claimed that one of the aims of genuine knowledge is, in Le Blond's words, to move from an unarticulated apprehension of existence to a rational knowledge of essence. Le Blond seems to have had some idea of defining [*x*] as quidditatively determining it. However, he appears to consider the whole process of defining in terms of statement-making, and he even speaks of a logical 'syllogism of essence' as dealt with in II 8. Even in his reference (380 = 79) to the famous example at *Phys.* I 1, 184b2, Le Blond fails to see that the mathematician's or other expert's knowledge of the circle in effect boils down to his ability to correctly identify the particular thing which every ignoramus can perceive but is unable to

<sup>377</sup> In Charles (1990, *passim*) there is talk of whether 'kinds' exist. In fact, Goldin's thesis (1996, 41-77) that the epistemonik procedure not only deals with concrete particulars but also with 'epistemic substances' is along the same (erroneously) line of thought.

<sup>378</sup> (1939a), 376-9 = (1979), 76-8.

recognize as a circle. Thus the expert's knowledge is in principle a piece of knowledge by acquaintance, prior to any statement-making. In addition, Le Blond continually judges the definition's (read the definiens') existence in terms of abstraction and immateriality.<sup>379</sup>

In her thoroughgoing study of the 'jugement d'existence' in Aristotle from 1946, Suzanne Mansion rightly assumes that this 'judgement' is concerned with the particular phenomenon under investigation. However, her observations are seriously confused by her continually taking (173-83) the definitorial identification in terms of a fully-fledged statement with existential import, although she rightly tends to qualify its statemental character. While she equates (174), like Le Blond, the 'syllogism of existence' with the 'syllogism of essence', and claims (183) that the 'real definition' owes its realness to a 'jugement d'existence' *being added*, she distinguishes (211f.) two moments of the definitorial process, one bearing on the nominal definition, the other concerning the recognition that all elements of a definition (read 'definiens') are satisfied by a particular thing.<sup>380</sup> In the final analysis, on the other hand, Mansion seems to regard this 'judgement' as representative of knowledge by acquaintance, accomplished by appropriate naming ('appellation'), rather than in terms of a fully-fledged assertion.<sup>381</sup>

## 6. 57 *The different ways of 'defining' things*

Chapter 10 deals with the different ways of defining things. Aristotle introduces (93b29-32) the first way by referring to the usual<sup>382</sup>

<sup>379</sup> (1939a, 368f. = (1979), 72ff. ("He [Aristotle] is confident that the world can be understood in universal terms (for that indeed is the very source of his scientific drive). [...] In this way he will progress towards that genuinely intellectual intuition of essences which forms the transcendent and yet fertile ideal of his 'discourse'."). Compare what he says elsewhere (1939, 175f.): "L'arithméticien pose au début et l'essence de l'unité et son existence (II 7, 92b16; 9, 93b24). [...] Par cette affirmation de l'existence du triangle et de l'unité, il semble qu'Aristote veut signifier que ces notions ne sont pas des fictions de l'esprit, qu'elles sont absolument *vraies*, cette existence, c'est la vérité, l'objectivité du concept, de l'essence". Note that in effect Le Blond's view of the εἶ ἔστι device is the intensional counterpart of the extensional interpretation argued for by Barnes and others ('that there are such things as [x]').

<sup>380</sup> "Le second est plus qu'un pur jugement d'existence: il implique la reconnaissance en un objet réel de l'ensemble des notes mentionnées dans la définition du nom, il équivaut à l'appréhension de la nature d'un être existant (*ibid.*, 215).

<sup>381</sup> "C'est donc bien d'existence concrète qu'il s'agit ici, d'une existence manifestée à l'intelligence grâce à la perception sensible" (*ibid.*, 216).

<sup>382</sup> *Top.* I 5, 102a1; 7, 107a37; VI 11, 148b23-25.



description of ὁρισμός ('definition' or 'defining') or ὅρος ('definition', or rather 'definiens') as the account of <a thing's> 'what-it-is', and then claims<sup>383</sup> that it is therefore clear that one type of definiens will be an account of what a name signifies (or a name-like account different <from a simple name>, such as 'plane angle'):

*APo.* II 10, 93b29-32: Since a definiens<sup>384</sup> is said to be an account (λόγος) indicating what a thing is, it is evident that one kind of definiens will be an account of what the name signifies (or a different name-like account (λόγος ἕτερος ὀνοματώδης), e.g. what 'plane angle'<sup>385</sup> signifies).

Ross is right in observing<sup>386</sup> that it is a mistake to say that Aristotle ever uses the label λόγος ὀνοματώδης for what is commonly called 'nominal definition'. Clearly this label meaning a 'phrase of the nature of a name' is the alternative to (and the grammatical counterpart of) the foregoing ὄνομα, not to what is signified by the expression λόγος τοῦ τί σημαίνει τὸ ὄνομα. Thus Aristotle claims that the first type of definiens is an account of what a name (or a name-like expression) signifies. The latter case is exemplified (in my reading of the Greek text) by the name-like expression στερεὰ γωνία.<sup>387</sup>

This way of defining is standardly called 'nominal', by nearly all commentators.<sup>388</sup> Although Aristotle does not use the label 'nominal definition', this is in fact what he is speaking of in the present

<sup>383</sup> In Barnes's view, "the unexpressed moral of this parenthesis is that every definition must be 'one account'; but that nominal definitions may be one in the first, Homeric, way, whereas real definitions must be one in the second way"; cf. *Detel* II, 676. I cannot see that nominal definitions are only *one* in the first sense, let alone that what is really meant by Aristotle at 93b29-37 is rendered by such a loose aggregate as the *Iliad*. Anyway, it is inconceivable that, when he assumes what the name 'triangle' signifies (see 92b15-16), the geometrician is thinking of some assemblage of words, instead of the dense formula 'three-sided rectilinear figure'.

<sup>384</sup> In the present context and its likes, the rendering 'definition' as referring to the act of defining will also do, but the rendering 'definitorial sentence' ([*x*] is *P*') is out of the question.

<sup>385</sup> Reading στερεὰ γωνία instead of the dubious MSS reading τί ἐστὶ τρίγωνον, of which τί ἐστὶ is deleted by Ross (636). The phrase στερεὰ γωνία is a name-like account because it acts like a simple name; De Rijk (1986), 272, n. 36.

<sup>386</sup> Ross (1949), 635. Also Whitaker (1996), 216f.

<sup>387</sup> Definitions of such expressions (e.g. of εὐθεῖα γραμμὴ, ἐπίπεδος ἐπιφάνεια, ἀμβλεία γωνία) are found at the beginning of Euclid, and were very likely also found in the opening sections of the *Euclid* of Aristotle's day, the *Elements* of Theudius; Ross, 635.

<sup>388</sup> E.g. Philoponus CAG XIII-3, p. 372 (see *Detel* II, 672); Tricot, 194, n. 3; Barnes, 213; (1994), 223; *Detel* II, 676. Ross (535) calls it 'verbal definition', and 'nominal definition' elsewhere (e.g. 656). We find an extensive discussion about the notion 'nominal definition' (including the different views of its nature in Aristotle) in Bolton (1976), 519-42.

context. On the other hand, as Ackrill has pointed out (1981a, 360), when Aristotle refers to knowing what a word 'signifies' he is not referring to purely verbal knowledge but to knowledge of actual items to which the word applies. That is why right after the nominal definition, Aristotle goes on to sketch how the investigator *uses* it, pointing out that when we are aware that the nominal definiens is actually satisfied by the phenomenon presented by sense-perception, we proceed to seek its 'because'. Thus the first type mentioned at 93b29-32 is what we usually understand by an adequate definition, viz. that whose definiens precisely renders the quiddity of the definiendum. So <what is signified by the name> 'triangle' is defined by <what is signified by the account> 'three-sided rectilinear figure', as 'plane angle' is 'angle between two intersecting lines'.

This type of defining things is the one that may have become familiar to the reader from the foregoing discussions. Once again it is assessed (93b32-35) by Aristotle as the one by means of which, after we have assumed it, we identify a thing as possessing an actual instantiation of the quiddity expressed by its definiens. He reminds the reader of the difficulties surrounding the hypothetical case that an instance is completely missing or only familiar to us coincidentally, viz. by being brought up by an appellation that does not inform us of the phenomenon's (entire) proper nature.

The short examination of the first type of defining, which serves to identify the substrate or attribute under discussion quidditatively as 'such-and-such a thing', winds up with a footnote-like remark about the composition of a definiens (which, by its very nature, is a definitorial more-than-one-word expression). The definiens meant here is not a unity by mere connection, it is claimed, like the *Iliad*, but something that exhibits the thing by means of saying *one* thing of *one* other thing in a non-incidental way (93b35-37). By the last few words Aristotle refers to cases as 'being affected by triangularity' as quidditatively identifying, say, a tympanum, or 'being a rational animal' as an identification of Callias.

So we are in a better position to understand why Aristotle should claim that being aware of *that* must precede any inquiry into *why*. There is nothing mysterious about it. What he tries to make clear is that you should first correctly (i.e. quidditatively, not 'coincidentally') identify the phenomenon as an actual instance of the quiddity expressed by the definiens before the 'because' can reasonably be sought. This is the chief purport of the opening paragraph of chapter 10:

*Ibid.* II 10, 93b29-37: Since a definiens is said to be an account of what a thing is, it is evident that one type will be an account of what the name signifies (or a name-like account different from it, e.g. what 'plane angle' signifies). Now when we are aware *that* this [viz. the quiddity expressed by it] is actually instanced, we seek *why* it is the case. But it is difficult to get such a hold of it if we are not aware that <the phenomenon> is an instance of it. The cause of this difficulty has been stated already, viz. that we do not even know whether it exists or not, except through a coincidental appellation.<sup>389</sup> (<By the way>, a definiens is one in two ways, either by connection, like the *Iliad*, or by revealing the thing by assigning one thing to one other thing, and this not as a coincidental attribute).<sup>390</sup>

This passage makes it quite clear that in the first type of definition the definiens (which is always a more-than-one-word-expression) aims at designating some one thing by means of an essential categorization, which precisely grasps its essential nature and, by doing so, its cause or explanation. Notice that when he speaks of the requirement that the state of affairs should be familiar to us, Aristotle seems to mean not that we should previously know that *this* object, so-and-so-qualified *is*, but rather that the investigator should be aware of what has earlier been called 'an as yet unanalysed phenomenon'.<sup>391</sup> What he has to investigate, then, is whether the essential categorization he has in mind really obtains, to the extent in fact that one is entitled to call the [*x*] perceived a 'something-essentially-being-*f*'. To my mind, that is precisely what Aristotle means when he remarks that it is not sufficient to be familiar with [*x*] under a non-essential categorization.

This leads us to Ackrill's question (1981, 101): "Why must knowledge that there is X (i.e. that there is such a thing as X ...) precede enquiry into what X is — and how can it, since surely one has to know what one is looking for in order to look for it?". Ackrill (102) rightly refers to II 8, 93a22ff. where Aristotle argues that the

<sup>389</sup> I.e. by bringing it up under an inappropriate appellation. *Pace* Bolton (1976), 515ff. and many others, it cannot be overstressed that the 'knowledge of existence' does not concern the general question of whether 'there are things with the essence under discussion'. This misunderstanding often gave rise to the non-problem whether nominal definitions have as such existential import.

<sup>390</sup> Charles (1994, 38) takes Aristotle as committing himself at 93b29-32 to a threefold view of successful scientific inquiry: stage one is achieved when one grasps an account of what a name or name-like expression signifies; stage two, when one grasps that what is signified by a name or name-like expression exists; stage three, when one grasps the essence of the object/kind signified by a name or name-like expression. These stages are analytically separable even if they are not always chronologically distinct; stages two and three occur 'at the same time' on occasion (93a16-20 and 35-36). For Charles's ambiguous use of 'exists' see below.

<sup>391</sup> See the example of the lunar eclipse at 93a29-b8 (my section 6.58).

investigator should start from a rough idea. To Ackrill, “Aristotle is right to see much scientific enquiry as movement from a rough idea to a full understanding of what some kind of thing or type of event is”, where, as Ackrill remarks, to be more realistic Aristotle “should allow that the original ‘rough idea’ may be very rough, not necessarily a grasp of part of the real definition, since the final scientific definition (of thunder ...) may not contain the terms by which X was originally identified and defined”. But why would Aristotle not allow this? It is true that, throughout the treatise Aristotle is discussing the ideal procedure<sup>392</sup> which should enable the investigator to tag the substrate (‘*hypokeimenon*’) or the attribute of the phenomenal state of affairs in the correct fashion (in applying the appropriate categorization, that is). However true this may be, there is no reason to believe that Aristotle would forbid us to seek genuine knowledge in any way we possibly can. After all, he also recognizes proofs (improper demonstrations, admittedly) using a non-causal middle as admissible for framing a syllogism of the ‘that’.<sup>393</sup>

Returning now to Aristotle’s discussions in chapter 10, there is yet another type of defining a thing which produces the definiens that makes clear ‘through what’ (διὰ τί) a thing is. Hence the former type signifies <the quiddity> but does not afford insight into it, while the latter does. Therefore the former will bear an unmistakable resemblance to a ‘proof’ of the quiddity, yet differs from a genuine proof by its way of positing (θέσει)<sup>394</sup> the quiddity. For there is a difference between saying *why* it thunders and merely *what* thunder is. In the former case the definer will say ‘because the fire is extinguished in clouds’, but to the question ‘what is thunder?’ the answer will simply be ‘a noise of fire being extinguished in clouds’. Thus the same account is expressed in a different way: in *this* way it is a ‘compressed (συνεχής)<sup>395</sup> proof’, in the other just a description (93b28-94a7):

<sup>392</sup> Cf. Ackrill (1981), 98.

<sup>393</sup> See I 13, 78a22ff.; Ackrill (1981), 95.

<sup>394</sup> This expression is commonly explained grammatically, as referring to the arrangement of the words (Ross, 636; Barnes, 214; (1994), 224; Detel II, 678). But the difference between the two is thus unduly belittled. Rather it should be taken to refer to their different ways of presenting the quiddity, one including the thing’s cause only implicitly, the other explicitly. Notice that *thesis* is used in the same sense at 94a9, in the description of the third type. See also my section 6.33.

<sup>395</sup> This adjective, which usually means ‘continuous’, is here pregnantly used for ‘not broken off’ by particles articulating the proof procedure’. To Averroes and Zabarella the difference depends on the presence or absence of the syllogistic form; Detel II, 673. Barnes (214; (1994), 225) thinks that Aristotle is probably

*Ibid.* II 10, 93b38-94a7: [...] in another sense the definiens is an account which makes clear a thing's 'because'. Hence the former type conveys a meaning but does not reveal <that which is signified> (δείκνυσσι δ' οὐ), whereas the latter apparently will have some resemblance to a genuine proof (οἶον ἀπόδειξις) concerning a thing's essential nature, differing only from <proper> proof by its <different way of> laying-down (θέσει).<sup>396</sup> For there is a difference between saying *why* it is the case that it thunders and <merely saying> *what* thunder is. For in the former case one will say 'because it obtains that fire is extinguished in clouds'; but <the answer to the question> 'what is thunder?' <is>: 'a noise of fire being extinguished in clouds'. Hence the same account is expressed differently: in one form it is a compressed proof (ἀπόδειξις συνεχής), whereas in the other it is just a definiens.

The difference between the two types mainly concerns the way in which they are defined, not the definiens taken as such (i.e. its objective content), we are explicitly told (94a6). Roughly speaking, we may distinguish the labels ὁρισμός, ὅρος, and λόγος thus: the first chiefly connotes the act of defining, or using a definition; the second primarily refers to the definiens as a formula; while the third commonly stands for the definiens including its significative content. Now the significative content of the two types is said to be the same, the τί ἐστι or quiddity, that is. The distinction between the two is rooted in the different ways in which the definer applies what is expressed by the definiens to the definiendum. The first type ('nominal definition') leads him to communicate a thing's 'what-it-is'<sup>397</sup> non-causally, by merely explaining the name, i.e. without providing us with any insight into the way this essence causes the thing to be constituted such-and-such; whereas the other, in addition to enumerating the constitutive elements, reveals their constitutive function.<sup>398</sup>

A third type is briefly indicated, merely by presenting the favourite thunder example, and presenting its partial, but surely non-coincidental definiens. It is further determined in operational terms:

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speaking of 'a demonstration that has immediate premisses'.

<sup>396</sup> Cf. I 2, 72a22-23: "A definition is a <kind of> assuming or laying-down". However, at 94a2 θέσις is commonly taken by the commentators to mean 'arrangement of the terms' (see my previous note), in spite of the fact that at 94a9 it is (correctly) rendered 'assumption'.

<sup>397</sup> It should be recalled that any definition is about a thing's τί ἐστι (93b29-30), either the complete one or the partial one (93a21-22: 'something of the thing itself').

<sup>398</sup> The two types are also found in *An.* II 2, 413a11-20.

*Ibid.* II 10, 94a7-9: Further, there is a definition of thunder, running ‘a noise in clouds’; this one<sup>399</sup> is the conclusion of the epistemoni proof concerning the quiddity.

Thus the investigator brings about a (partial) definition of the phenomenon under investigation in the conclusion of the epistemoni proof, by indicating a part of its quidditative elements. As a matter of fact, Aristotle has referred to this partial definition earlier by speaking (93a21-23) of our “grasping something belonging to the thing itself”, where he significantly gives the example of the same partial definiens of thunder (‘a noise in clouds’) as is found in the present text. In the summary of 94a11-14 this type will be brought up as the third one, to be well distinguished from the foregoing ones.

It is often held that in the next sentence (94a9-10) a fourth type of defining is briefly listed by Aristotle as “the way of defining ‘immediates’ or starting-points” (τῶν ἀμέσων ὁρισμός), which is described as “the positing of the ‘what-it-is’ of things, which happens out of the context of proof”. This would make the number of types of defining things four. However in the short summary (at 94a11-14) only three of them are enumerated (in another order, [4], [2], [3], as is commonly assumed), so that, quite remarkably, at least on the face of it, the first type of 93b30ff. appears to be missing entirely:

*Ibid.* II 10, 94a11-14: One way [the supposed nr. 4] of defining, therefore, produces a definiens of things which is out of the context of proof;<sup>400</sup> another [2] produces a reasoned definiens of the thing’s quiddity, which differs from the genuine proof merely in aspect (πτώσει);<sup>401</sup> a third [3] is the one rendering the thing’s partial definiens being the conclusive part of the apodeictic proof.

Throughout the centuries the exact number of the types of definition Aristotle countenances has been hotly debated among the commentators,<sup>402</sup> the issue being ‘are they four or three?’ Philoponus, the Ancient adherent of the first alternative, thinks (CAG XIII-3, p. 372f.) that the first type, which he takes to represent ‘nominal definition’, is not an authentic way of defining, because it disregards the thing’s

<sup>399</sup> The neuter τοῦτο refers to the preceding masculine ὅρος, the neuter form being a result of attraction.

<sup>400</sup> That is to say, it is (a) not susceptible of being proved (‘undemonstrable’), and (b), qua unapplied nominal definition, not even coming about in the course of a proof (δι’ ἀποδείξεως) either.

<sup>401</sup> So πτώσει is synonymous with θέσει. Because of the usual grammatical use of πτώσις it might seem attractive, at first sight at least, to take both labels to refer to the grammatical word-order.

<sup>402</sup> A detailed report is found in Detel II, 672-5.

true nature, and is therefore omitted in the summary. Averroes and Zabarella, however, are of the opposite view, but count their three types differently: the nominal definition of 93b29-37 is taken to be identical with the third one, and opposed to the above (2) and (4), which, unlike the twin (1)-(3), are regarded as real definitions presenting the causal quiddity.

Among the modern commentators Ross (634-6) extensively argues for the interpretation defended by Averroes and Zabarella and countenances the trio.<sup>403</sup> Barnes (212f.; 1994, 223) on the other hand, and Bolton<sup>404</sup> join the Philoponus tradition, but, following Zabarella, they identify (3) and (1). To Barnes, eventually, only two definitions are genuine cases of definition: (3) is only a variant of (2), and the fourth one is just a product of the “muddled argument” of the previous chapter.

This much is certain, at I 8, 75b31-32, the same three types of defining as are found in the present summary are enumerated as an exhaustive list: ‘Α ὁρισμός is either a starting-point of epistemonik proof, or a sort of proof in way of positing (our (2) ‘reasoning definition’), or the conclusive part of an ἀπόδειξις’ (affording the partial definiens, our (3)).

Thus the question remains, ‘What about the first-mentioned type occurring in the two aforesaid shortlists (75b31-32 and 94a11-14)?’ To my mind, only three types of defining things are listed in chapter 10, 93b29-94a10. The enumeration of the three listed in 93b30-94a9 is clearly articulated: (1) ὁ μὲν τις (93b30, taken up by Εἷς μὲν at 93b38) and ὁ μὲν πρότερος at 93b39, referring to the first one, the so-called ‘nominal definition’; (2) ἄλλος δ’ at 93b38, taken up by ὁ δ’ ὕστερος at 94a1, introducing, and referring to the complete causal definiens; (3) ἔτι at 94a7, introducing a partial causal definiens. The putative fourth type of the list (at 94a9-10) is not announced by such introductory words as ἄλλος, τέταρτος or ἔτι, or in any other significant fashion and hence should not be seen as a separate type at all.

On this interpretation, two questions remain: (a) are the three types as discussed in 93b30 and enumerated in the same order in the two shortlists really the same? And (b) what can we make of the

<sup>403</sup> Detel II, 676-83, recognizes three kinds of definition, by identifying (676) ‘nominal definition’ with ‘partial definition’, because to him, in a sense it coincides with partial definition, while inasmuch as they are not the same thing, the nominal definitions play only a subordinate role. For other views about the precise number of definitions see Barnes (1994), 222; Deslauriers, *passim*.

<sup>404</sup> Bolton (1976), 522, n. 14; (1987), 142-4.

sentence 94a9-10, where a fourth type of defining appears to be brought up?

To begin with the second question (b), the lines 94a9-10 are loosely connected with the discussion of the types (2) and (3), in which the causal definitions containing a 'middle', either explicitly (2), or implicitly (3), are dealt with. The addition of 94a9-10 only contrasts them with the first type, the nominal definition: "But, <unlike the types (2) and (3)>, the (nominal) definition of 'immediates' (τῶν ἀμέσων) is merely<sup>405</sup> a stipulation of a thing's quiddity, which is not susceptible of proof". For example, the nominal definitions of 'triangle', which runs 'three-sided rectilinear figure', or of 'circle' ('closed plane curve consisting of all points at a given distance from a point within it called the centre') have been initially 'stipulated' by, say, Theudius or Euclid, and are then adopted and 'assumed' by others, mathematicians, as well as non-mathematicians. Generally speaking, nominal definitions are never proved, not even by their inventors; it is only whether they have been correctly applied that can be put to the test.<sup>406</sup>

This naturally leads us back to our first question (a). For a correct understanding of the synopsis it is useful to recall the distinction drawn earlier (II 9, 93b22-28) between 'immediate' essences and those that have a 'middle' (μέσων), of which the author (II 8, 93b15-20) had claimed before that, properly speaking, they are not proved by an epistemonik procedure but rather 'exhibited' *in the course of* (διὰ) the syllogistic proof. Obviously, the three items of the synopsis are precisely (1) the immediates, which are the objects of nominal definition, (2) the complete causal definientia, which are involved in the 'compressed proof' (ἀπόδειξις συνεχής), and (3) the incomplete ('partial') causal definientia, which are involved in an apodeixis and come about *in the course of* the syllogistic proof.

To understand the operational function of the three types of defining, Philoponus can put us on the right track. When commenting (372<sup>8</sup>ff.) upon 93b29-37, he remarks that Aristotle clearly prefaces the enumeration of the three types by the general definition of 'definition', and, then, goes on to deal with the three types:

<sup>405</sup> For the ellipse of the idea of 'only' (or rather the omission of the word μόνον expressing this idea) see Verdenius (1981), 348; 351. Another nice example is the famous adage at *APo.* I 18, 81b6: "It is sense-perception <alone> which is adequate for grasping the particulars".

<sup>406</sup> In modern terms, definitions must be 'workable', not 'true'.



- ὁρισμὸς εἰδικός = λόγος τοῦ τί ἐστὶν ἀναπόδεικτος, the definiens taken as still outside the apodeixis, being just a starting-point (this is the first-mentioned of the shortlists);
- ὁρισμὸς σύνθετος = συλλογισμὸς τοῦ τί ἐστὶν πῶσει διαφέρων τῆς ἀποδείξεως, being a composite, complete definition, presenting the complete essence qua cause, featuring as nr. (2) both in the discussion of chapter 10 and in the shortlists; it is the one which expresses the reasoned definiens of the thing's complete quiddity ;
- ὁρισμὸς ὑλικός = συμπέρασμα τῆς τοῦ τί ἐστὶν ἀποδείξεως, expressing the 'material' or 'generic'<sup>407</sup> part of the complete definiens, to wit the aforesaid 'partial definiens'; it features as number (3) both in the discussion of chapter 10 and the shortlists.

Philoponus failed to see (a) that 94a9-10 does not refer to a fourth type, and (b) that the passage 93b29-37 he is commenting upon divides into the mere description of 'nominal definition' (b30-32) and how it is involved in the preparatory stage of the epistemoni procedure (b32-35), where it is 'assumed'. However, this did not prevent him from grasping the role of the three items listed in the synopsis.

To my mind, the picture arising from chapter 10, when explained in the light of chs. 8-9, implies that the first type of definition as discussed at 93b29-37 bears on nominal definition, which is taken at first (at 93b30-32) as an unapplied definitorial formula, and then (93b39-94a1) as applied in matters of proof; whereas the complete and partial causal definitions are always involved in the epistemoni procedure, one in the compressed proof, the other in a genuine proof, in the course of which it is exhibited, not proved.

The concluding part of the chapter draws a general inference from the discussions of chs. 8-10, regarding the general problem connected with the link between proof and definition, inasmuch as a thing's quiddity is concerned, and presents the assessment of their roles in the apodeictic procedure:

*Ibid.* II 10, 94a14-19: So it is evident from what has been said (1) both in what *sense* there is a 'proof' (ἀπόδειξις) of a thing's quiddity, and in what *sense* there is not; and in what *cases* there is and in what *cases* there is not; again (2) in how many *senses* there is talk of 'definition', and in what way it reveals (δείκνυσι) the quiddity and in what way it does not, and in what *cases* it does and in what *cases* it does not; again (3) how definition is related to proof (ἀπόδειξις), and in what way it

<sup>407</sup> In the opposition εἰδικός vs. ὑλικός the latter term alludes to the genus that is often considered the essence's 'material' or 'underlying' constituent, while the species is taken to be its formal component.

is possible for them to be of the same thing and in what way it is not possible.

6. 58 *Did Aristotle redeem his promise of more precision?*

Let us try to show if Aristotle's examination of these questions in the preceding chapters (8-10), of which he had promised (93a1-2) that he would discuss their main points with more precision (καλῶς) than before, may lead us to a better understanding of his intentions.

(Question 1a): In what sense is there genuine proof of a thing's quiddity, and in what sense is there not? *Answer*: It is impossible to establish a deductive proof proper of any definiens. But when 'proof' is taken in the weaker sense of 'exhibition' (δείξις or δήλωσις), such a proof is possible, to wit, of the definiens actually applying here and now.<sup>408</sup>

(Question 1b): In what cases is there proof (in a weaker sense, that is) of a thing's quiddity, and in what cases is there not? *Answer*: There is 'proof' ('exhibition') of a thing's definiens as accomplished *in the course of* an apodeixis (not *by* it). Even this 'proof' in the weak sense is missing in the case of a purely nominal definition, which, while preceding the epistemonik procedure including its preparatory stage, is completely out of the epistemonik context (ἀναπόδεικτος).

(Question 2a): In how many senses is there talk of 'definition'? *Answer*: The act of defining either produces (1) a nominal definiens, (2) a complete causal definiens, or (3) a partial causal definiens.

(Question 2b): In what way does the definition actually reveal (δείκνυσσι) a thing's quiddity, and in what way does it not? *Answer*: The

<sup>408</sup> Some older commentators (Maier, Solmsen) were of the opinion that at *Top.* VII 3, 153a6-24 Aristotle admits that definitions can be really 'proved'. But this passage, to begin with, only deals with a definition of a thing's essential nature, which obviously bears on what we have called earlier 'to define or identify a thing quidditatively'. Moreover, as was already pointed out by Cherniss (1944, 34, n. 28), in *Top.* "the establishment of a definition admittedly depends on winning the consent of the respondent to certain assumptions"; cf. 154a24-32. Cherniss well observed that the assumptions involved in this disputational procedure — without which, according to *Top.*, any 'proof' (including the dialectical one) of the definition is impossible — are the very assumptions which at *APo.* II 6, 92a7-10, are said to conceal a begging of the question, if a genuine proof were to be sought. Thus in *Top.* VII 3 (and 5) the fact that so much emphasis is laid upon the indispensability of assumptions to be made by the opponent and the respondent's consent to them rather implies that in *Top.* there is no question of a strict proof either. In his comments *ad loc.* Alexander (CAG II-2, p. 503<sup>12</sup>-504<sup>15</sup>) significantly distinguishes between δείξις and ἀπόδειξις, saying that to Aristotle the latter is impossible as far as the applicability of a definiens is concerned. Notice that, here at least, Alexander seems to think of a definiens actually applying to something.

nominal definiens does not reveal by itself an actual thing's quiddity, but only makes clear what the term indicating the definiendum signifies. When it is actually applied by the investigator to an element (viz. substrate or attribute) of the analysed phenomenon, the definiens exhibits (or identifies) the substrate's or attribute's mode of being as an actual instantiation of what is signified by the definiens.

(Question 2c): In what cases does it actually reveal a thing's quiddity, and in what cases does it not? *Answer*: In cases in which we have succeeded in analysing the initial phenomenon presented by sense-perception into a substrate and its attributive mode of being, the applied definiens exhibits the substrate's or attribute's quiddity, or, putting it differently, the thing under investigation is identified as an instance of what is conveyed by the definiens. As long as the phenomenon is unanalysed, or we are only vaguely aware of its elements through a coincidental appellation, any exhibition of the thing's quiddity is out of the question.

(Question 3a): How is definition related to proof? *Answer*: The definiens as exhibited by δειξίς resembles a genuine proof (ἀπόδειξις), inasmuch as each of them has bearing on the thing's essential nature. But they differ in their different ways of laying it down — one merely saying *what* the thing under discussion is, the other also saying *why* it is so-and-so.

(Question 3b): In what way can definition and proof be of the same thing, and in what way can they not? *Answer*: In accordance with the answer given to (3a), the same account ('objective content') of the definiens is expressed in different manners, that is to say, in cases in which only the definiens is exhibited, the same account only features as exhibited *in the course of* the epistemonical proof, so that there is a 'compressed proof' (ἀπόδειξις συνεχής) only. In this respect the accounts are not really the same.

Ackrill (1981a, 359) has well observed that Aristotle's primary and essential aim in II, chs. 8-10, is to explain the nature and structure of definitions and the relation of definition to demonstration. This leads him (360) to asking *what* syllogism exactly Aristotle has in mind as the syllogism in which a thing's definition comes about. As we might expect from Aristotle, he provides us only with fragments of deductions, but does not bother to write them out fully and carefully.<sup>409</sup>

<sup>409</sup> My following observations have been inspired again by Ackrill's lucid discussion of the well-known 'thunder example', whose universal (*Barbara*) and partial (*Darii*) forms are thoroughly commented upon by him (360-3), in the forms in

Taking the lunar eclipse example (from 93a29-b8), we may address the problem thus. At first there is an as yet unidentified phenomenon perceived by sense-perception, say, the moon's being obscured. A preliminary requirement is that the phenomenon should not be brought up coincidentally by calling it, say, 'a frightening event', since if it is an epistemonicon proof we are after, this will not get us anywhere. Seeing that some affection of the *moon* is involved, it is better to bring up the phenomenon by means of the appellation, 'the moon's being eclipsed', or, using the alternatives suggested at 93b5-6, 'the moon's being rotated' or 'the moon's being extinguished'. Supposing, you will go for 'the moon's being eclipsed', the problem to be solved will be: '[The moon's being eclipsed] is it, or is it not the case?' Now you must assume the nominal definition of 'being eclipsed', i.e. 'being deprived of light owing to a being screened by the earth'; just *assume* it, like the mathematician must simply assume the nominal definition of 'unit', 'point', and so on (76a32-36; 93b24-25).

At this stage the proper proof can get off the ground, and you may now proceed to frame the apodeictic syllogism (retaining, this time, the implication form of *APr.*):

I: 'If being screened by the earth applies to every being eclipsed and being screened by the earth applies to the moon <on whatever occasion being obscured>, then, being eclipsed applies to the moon <on each of those occasions>'.

All you have to do now is to apply the universal conclusion to the particular instance of the lunar darkening under examination, saying e.g.:

Ia: 'Being eclipsed applies to this moon qua being screened by the earth'.

The relation of the definiens to the universal epistemonicon proof (I) may now be clear. The 'definition' (= 'identification') of this instance of 'being eclipsed' ('lunar eclipse') is *not proved* by the apodeixis, but, after it has been *assumed* in terms of a nominal definition, it is *exhibited*, i.e. shown to be actually satisfied, not *by* but *in the course of* the syllogistic proof. The relationship between proof and definition is *eo ipso* revealed.

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which they are suggested by *APo.* II 10, 94a7-9 (*Barbara*), and I 13, 78a39-b3, and b10-11; II 8, 93b10-12; II 12, 95a17-19 (*Darii*).

The thunder example can be treated in a similar fashion (as taken from 93b8-14 and 94a2-8). First, after the phenomenon of thunder has been perceived by sense-perception (and experience, for that matter), the non-incidental appellation is stochastically (and supported by previous experiences) chosen: 'a noise occurring in clouds'.<sup>410</sup> The general thesis that thunder is a noise in clouds can be supported by this apodeictic syllogism:

'If quenching of fire in clouds applies to every thunder  
and noise in clouds applies to every quenching of fire in clouds  
then, noise in clouds applies to every thunder'.

Next, the universal conclusion is applied to the particular instance of thunder. Here, too, the 'definition' of the particular thunder phenomenon is not properly 'proved' by the apodeictic syllogism but exhibited *in the course of* the proof, that is to say, the phenomenon is identified as satisfying the definiens 'noise in clouds'.<sup>411</sup>

By the above reconstruction it will be patently clear, once again, that the initial nominal definition is not proved, and not argued for in some other way either; it is still simply assumed. What happens in the course of the epistemonical proof is merely that the particular phenomenon under examination is shown to satisfy the definiens: 'this is an instance of lunar eclipse, or thunder'. This is precisely what Aristotle had claimed in the final part of chapter 8 (93b15-21).

It may be useful before concluding our discussion of the chapters 8-10 to present a general assessment of the notion of defining, which is so pivotal to the epistemonical procedure, as it is also the backbone of the qua-procedure. As we saw earlier, it is the investigator's task to 'define' or 'identify' the particular substrate under examination in order to bring it up under the appellation that is most appropriate to produce the knowledge he is after. The act of defining (*ὀρίζειν*) as meant in this context boils down to saying: "Yes, this is a real instance of what is conveyed by the definiens which will afford us the appropriate 'middle' to frame the intended epistemonical proof".

This sense of *ὀρίζειν* may be compared to Plato's use of the term in *Theaet.* 190A2, where it is precisely this verb Plato uses to indicate the inner saying "yes" or "no" to one of the several possibilities the mind in its inner dialogue considers and reconsiders as being or not

<sup>410</sup> Coincidental naming could make us indicate the sense-datum with appellations such as 'a sign of Zeus's anger'.

<sup>411</sup> It cannot be overstressed that any 'syllogistic' framework of the epistemonical procedure is merely an expanded qua-proposition; my section 2.75.

being the case. Gabriel Nuchelmans (1973, 19) aptly described this sense of the verb as follows:

“[...] in forming a judgment one marks out, by drawing boundaries around it, as it were, that one of the considered states of affairs which, after due deliberation, seems to have the best credentials”. Nuchelmans (*ibid.*) rightly thinks it noteworthy that Plato “uses exactly that word from which in later times the name for the indicative mood will be derived. Dionysius Thrax (*Ars grammatica* 13, ed. Uhlig, p. 47) calls the indicative mood *horistikê enklisis*”.

In a similar vein Apollonius Dyscolus designates the indicative mood and its function by ὀριστική and ὀρίζειν, saying (*De syntaxi*, p. 117 Uhlig) that in indicatives the notion of indicating and, consequently, the idea of affirming are included, since we can answer questions either by “yes” or “no” or by a verb in the indicative mood. Elsewhere (*ibid.*, p. 346) Apollonius explains the label ὀριστική ἔγκλισις by pointing out that in using the indicative mood we define something by evidencing it (ἀποφαινόμενοι ὀρίζομεθα). The latter phrase in particular reveals that this way of defining or determining comes close to evidencing that something is the case.

Thus it seems that Aristotle’s use of ὀρίζειν in *APo.* already features much of the later focal idea of indicating that something is actually the case.

Reviewing Aristotle’s extensive discussion of the role of defining in epistemonik proof, we can state that in spite of the invariable peculiarities in Aristotle’s manner of expression, which John Ackrill has so well described elsewhere as ‘dangerously elliptical’, there is no reason to accuse him of producing muddled arguments. Should Aristotle have had the intention to publish all his lecture notes as they stand, he would surely not have come out as a gifted didactic author, unless he thought the best way of teaching would be to strain his readers to the limit.

## 6. 59 *Recipes for the discovery of definitions*

Chs. 13-15<sup>412</sup> aim at providing recipes for the discovery of appropriate definitions by describing the required procedure of what is called ‘hunting for the quidditative appellations’ (θηρεύειν τὰ ἐν τῷ τί ἐστι

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<sup>412</sup> Chs. 11 and 12 deal with the four kinds of cause (‘explanation’) which can function as ‘middle’, and how they function when past or future events are involved; Ross, 637-53; Barnes, 214-29; Detel II, 684-738.

κατηγορούμενα; 96a22-23) for the substrate or the attribute, which are the basic constituents of any genuine epistemonik proof. This task is contrasted with the one expounded in II, chs. 3-10, which is alluded to at 96a20.<sup>413</sup>

It seems useful first to assess chapter 13 in the broader context of *APo*.<sup>414</sup> In chs. 8-10, Aristotle dealt with the several types of defining and explained to what extent definitions can be involved in epistemonik proof or its preparatory stages. One of the main items was the distinction between 'immediates' or 'starting-points' on the one hand, and things that have a 'middle' on the other (9, 93b22-28). As for the latter, we were told that it is possible to exhibit their essential nature *in the course of* the epistemonik procedure, although not *by* a demonstration proper (*ibid.*). The members of the former group, on the other hand, must be assumed, *or exhibited in some other way*, Aristotle argued (93b22-23). In the present chapter the author goes on to expound this alternative procedure.

The compositorial structure of this long chapter is reasonably clear. It divides into two main sections: in 96a24-b14 the formal conditions for finding a thing's essence are described, and exemplified by the search for the triplet's quiddity; the section 96b14-97b6 deals with the use of making divisions to arrive at a thing's quiddity.

The chapter opens with a concise recapitulation of the purport of the previous chapters. On the current interpretation (Ross, 656), their main objective is described as the correct distribution of the quiddity over the terms (ῥοπος), viz. of the apodeictic syllogism. Thus Aristotle is supposed to refer to the different ways in which the quiddity under discussion (viz. that of the substrate or attribute of the initial thesis to be proved) occurs, either, that is, in a suitable appellation of the substrate or in that of the attribute.<sup>415</sup> An alternative interpretation could be to take ῥοπος at 96a20 (like ῥοπον at 93b38) as 'types of defining' (or rather of 'definientia') and the subsequent καί to be used epexegetically, and Aristotle to be referring to chapters 8-10 in particular. On this interpretation, Aristotle reminds us of his explanation in what different ways the quiddity is involved in the epistemonik procedure, including its preparatory stages, to wit, either as (1) the object of the nominal definition, (2) as occurring in the

<sup>413</sup> Barnes, 229f.; (1994), 240.

<sup>414</sup> De Rijk (1995), 97. This and the next few chapters will also be discussed in my section 6. 7, where the καθ' ὅλου requirement will be re-assessed.

<sup>415</sup> Ross, 636.

‘compressed proof’ or ‘complete definition’, and (3) in its capacity of being exhibited partially as part of the the apodeictic syllogism’s conclusion. I would prefer the alternative interpretation for compositorial reasons (though they do not seem cogent). In a21, the author clearly reminds us of the different senses in which the two technical terms, ἀπόδειξις and ὁρισμός, are used, the former meaning either ‘compressed proof’ or ‘full-fledged epistemoni proof’, the latter either ‘nominal definition’ or ‘exhibition of the definiens actually applying’.

Anyway, in the next few lines Aristotle (96a22-23) announces that he will discuss how one should hunt out the quidditative appellations one must be familiar with for correctly framing an epistemoni proof:

*APo.* II 13, 96a20-23: We have explained above in what (different) ways the quiddity is rendered, distributing them over<sup>416</sup> the (different) types of defining, namely in what sense there is ‘proof’ or ‘definition’ of the quiddity and in what sense not. Let us now say how one should hunt out the (appropriate)<sup>417</sup> quidditative appellations (τὰ ἐν τῷ τί ἐστι κατηγορούμενα).

In the present context as well as elsewhere, the term κατηγορούμενα is commonly taken to mean ‘predicates’. However, this rendering ignores the unmistakable fact that when he frames epistemoni proofs, Aristotle indiscriminately deals with quidditative analyses of both the substrate and the attribute terms. Therefore the neutral semantic meaning of κατηγορεῖσθαι ‘to be said of’ should be preferred,<sup>418</sup> and the participle should be taken to refer to the quidditative appellations of the substrate (or the attribute, respectively).

Along this line of thought we are in a better position to account for the fact that Aristotle (96a24ff.) begins by explaining an important preliminary semantic item, to wit, in what different ways appellations derived from what falls to a thing apply to it. Some of those deriving from permanent properties have a wider application, though still remaining within the thing’s genus. The author goes on to explain what he means by ‘having a wider application’ and unfolds

<sup>416</sup> My attempt to render the accusative εἰς τοὺς ὅρους.

<sup>417</sup> For this use of the definite article see Kühner-Gerth I, 593; Verdenius (1981), 351.

<sup>418</sup> My sections 2.2 and 4.14. In line with the usual mistake of assuming that Aristotle has sentence predication instead of ‘pre-sentential’ appellation in mind here, the ὑπόρχειν at 96a24ff. is commonly taken to stand for ‘belonging as a (potential) predicate to some subject’, instead of ‘being an attribute <which may serve for procuring an appellation for the underlying substrate>’.



a further, limitative determination of this property, viz. 'the wider application's still remaining within the genus'. To observe these two conditions at the same time turns out to be crucial for finding the most adequate appellation. As usual, Aristotle compresses the two instructions into one single example, showing that (a) the appellation 'being' (which evidently does not remain within the genus) is far too wide to start off the search, and (b) appellations that are not precise enough but whose application does not transcend the thing's genus, will do:

*Ibid.*, II 13, 96a24-35: Of the things which hold of something always, some have a wider application,<sup>419</sup> though not beyond their genus. I use the expression 'extend further' (ἐπὶ πλεόν ὑπάρχειν) for all that which holds of the particular thing universally, but also of something else. For example, there is something which holds of every triplet (τριᾷδι) but also of non-triplets, as 'being' falls to the triplet, as well as to non-triplets, but also <outside the genus> to non-numbers; <so 'being' has too wide an application>; on the other hand, being odd both belongs to every triplet and belongs further (for it belongs also to the quintuplet), but not outside its [i.e. the triplet's] genus [viz. number]; for the quintuplet is a number, and nothing outside number is odd. Well, such things [i.e. of the latter sort] we must take up to the first point at which just so many are taken that each have a wider application <than the specific thing under discussion> but all of them together (ἅπαντα) will not. For *this* must be the thing's essence (οὐσίαν τοῦ πράγματος).

Subsequently it is shown that the collection of precisely those components are constitutive of the thing's (the triplet's) complete quiddity, whereas, when taken separately, they also belong to other things falling under the genus they have in common with the triplet (96a35-b1). Sticking to the triplet example, Aristotle then goes on to make clear that that the collection of precisely these constituents must make up the triplet's quiddity, because semantically it commensurately (καθ' ὅλου)<sup>420</sup> applies to 'triplet':

<sup>419</sup> The Greek text has 'extend further'.

<sup>420</sup> Aristotle explicitly refers to I, ch. 4, 73b26ff., where he has introduced the notion of καθ' ὅλου ('commensurately applying', not merely 'universally applying' = καθόλου); my sections 6.35 and 6.71. Ross's discussion about the argument of 96b1-6, including his emending the MSS reading ἀναγκαῖα into καθόλου, is chiefly due to his reading καθόλου at 96b3 instead of καθ' ὅλου. Likewise the correct rejection of Ross's emendation by other commentators (e.g. Barnes, 71, n. 1 and 230f.; 1994, 64, n. 16 and 241) still lacks full stringency by their retaining the reading καθόλου instead of καθ' ὅλου at 96b3.

*Ibid.* II 13, 96b1-5: Since we have made clear in the previous examinations [I 4, 73b26ff.] that what is said quidditatively is necessary [I 6, 74b7-10; 75a28-29], and what is said commensurately is necessary, and in the case of the triplet (and of anything else of which we take the constituents in the aforesaid way)<sup>421</sup> the constituents are selected quidditatively, the constituents thus selected must make up the triplet.

Next Aristotle (96b6-14) presents an argument *a contrario*. Supposing this collection of quidditative elements were to fail to make up the triplet's complete quiddity, then it must be something like a genus, either with or without a name of its own, and its application will extend beyond the triplet; for let it be supposed that the genus is such as to have the widest potential application. If the collection applies to nothing other than individual instances of triplet, it must make up the quiddity of 'what-it-is-to-be-a-triplet' (τὸ τριάδι εἶναι); for let this too be supposed, that the essence of any particular (ἡ οὐσία ἢ ἐκάστου) is the ultimate appellation<sup>422</sup> of this sort to hold of the individuals. Hence in the case of anything else exhibited in this way, in a similar way its essence will come to the fore. For instance, the ultimate appellation<sup>423</sup> (made up by the collection 'of modes of being, F,G,H' ) which applies to any instance of, say, 'tree' will be 'what-it-is-to-be-a-tree'.

The final sentence clearly refers to the καθ' ὅλου requirement. The essential nature of, say, a tree is the ultimate appellation (comprising the constitutive notions, F,G,H etc.) which applies to all and every particular tree, to the extent that if you were to go any further by adding another constituent, the ultimate appellation would no longer apply to all trees, but only to a subclass, such as oaks or plane trees.

In the subsequent paragraph (96b15-25) Aristotle proceeds to show how we can check whether a collection of a thing's constitutive elements is representative precisely of its quiddity (i.e. convertible with it). First the different steps needed to arrive at determining the

<sup>421</sup> Taking at 96b5 οὕτως with λαμβανόμενα (as at 96b4: οὕτω λαμβάνεται).

<sup>422</sup> The phrase (96b12-13) 'ultimate appellation' (ἔσχατος τοιαύτη κατηγορία) should be associated with the rule given at 96a32-35: "It is attributes of this kind that we must select, *up to the point* where, though singly they belong to more <than what is signified by the term standing for the substrate>, collectively they do not; for this <complex of appellations> must be the quiddity of the object under examination (τοῦ πράγματος)".

<sup>423</sup> Of course, κατηγορία stands for the semantic heading 'appellation', not the syntactical item 'predication' or 'predicate'; my sections 2.41 and 4.14.

appropriate collection are pointed out. They are four: one must (a) divide its genus (viz. the genus common to all the elements of the collection) into its primary *infimae species*; (b) get the definitions of these species; (c) ascertain what the category of the genus is; (d) study the special properties in the light of the primary common attributes:

*Ibid.* II 13, 96b15-21: When you are dealing with a certain collection (ὅλον τι), you should (1) divide the genus into what is specifically indivisible, i.e. into the primitives<sup>424</sup> — e.g. number into triplet and pair<sup>425</sup> — then (2) in this line of approach (οὕτως), try to get definitions of these primitives — e.g. of straight line (εὐθείας γραμμῆς),<sup>426</sup> circle, right angle — and next, (3) after getting hold of what the appropriate category (τὸ γένος) is — e.g. whether it belongs to quantitative or qualitative beings — (4) examine its proper attributes (τὰ ἴδια πάθη) by going through the primitives they have in common.

Barnes deems this paragraph “exceedingly difficult” and even thinks (231) that its overall purpose is obscure.<sup>427</sup> At first glance, he seems to have a point. But perhaps there is a way out of our misery. Trying to explain this paragraph in the context of the foregoing discussions, and anticipating the exemplification given in the subsequent part of this paragraph (96b30-35), one might perchance discover the basic strain of what is being said.

First, the certain ‘whole’ referred to in the opening sentence might be taken as a collection of items by which the thing under discussion is initially indicated, e.g., speaking of the phenomenon of our barking and tail-wagging dog Fido as the collection ‘small, spotty-coloured, warm-blooded, audible, docile, agile entity’.

The first step, which can be gathered loosely from what we are told in Aristotle’s biological works,<sup>428</sup> will be to divide each of the different genera involved into their indivisible primitives, i.e. the genus ‘sized’ belonging to ‘small’ into the primitive ‘of this special size’; the genus ‘coloured’ belonging to ‘spotty-coloured’ into the primitive ‘having this colour variety’; the genus ‘animal’ belonging to ‘warm-blooded’ into its primitive, ‘dog’; the genus ‘sounding’ belonging to

<sup>424</sup> For this sense of πρῶτος see Bonitz, *Index*, 652b53-653a4, and my *Index* s.v..

<sup>425</sup> I. e. not stopping the division with ‘odd number vs. even number’ or ‘integer vs. non-integer’.

<sup>426</sup> This phrase is often replaced by the neuter substantivated adjective τὸ εὐθύ.

<sup>427</sup> “If 96b16-25 has a coherent interpretation, it remains to be found” (Barnes, 233; 1994, 244). For the different attempts made to elucidate this section see Ross, 654; 657-9; Barnes, 231-3; (1994), 242-4; Detel II, 740; 745f.; 756-61.

<sup>428</sup> E.g. *HA* I 1, 487a14-488b28; cf. *Problem*. X 45, 895b23ff.

'audible' into the primitive, 'barking'; the genus 'tractable' belonging to 'docile' into the primitive, 'tame by nature'; and the genus 'self-moving' belonging to 'agile' into 'four-footed', each time omitting any intermediate between the genus and the primitives (e.g. 'having inarticulate speech' between 'sounding' and 'barking', or 'pedestrian' between 'self-moving' and 'four-footed'), all in accordance with Aristotle's instruction (96b16-17) with regard to the notion 'number'.

In the next step one should attempt to define each of the primitives found — that is, in our case, 'sized', 'coloured', 'animal', 'sounding', 'tractable', and 'self-moving' — whereas the third step should lead to identifying the respective categories under which these genera fall, three in our case: the first category of Subsistence or Substance ('animal'), Quantity ('small'), and Quality (the same holds good for the remaining categories). The last, decisive step is to examine the proper attributes of the initial phenomenon in the light of the primitives they have in common. In the present case we will thus arrive at the quidditative definiens, 'four-footed, tame, animal'.

On this interpretation, we can understand that Aristotle (96b21-25) says that from the above procedure it will come about that the properties of the things compounded out of the primitives (συντιθεμένοις ἐκ τῶν ἀτόμων) follow from the respective definientia, because in every case the starting-point (ἀρχή) consists of the incomposite primitive and its definiens, while the respective attributes apply to these primitives (τοῖς ἀπλοῖς)<sup>429</sup> only by themselves (καθ' αὐτά),<sup>430</sup> and to the others (viz. the complex entities) consequentially (κατ' ἐκείνα). For instance, 'tame' will turn out to be a *per se* attribute, whereas 'docile' or 'spotty-coloured' are consequential.

The following paragraphs 96b25-35, 96b35-97a5, 97a5-22, and 97a23-b6 continue the discussion of the use of division in our search for the τί ἐστίν. Aristotle (96b25-35) begins with a remark on the use of the (Platonic) division according to the differentiae for the aforesaid sort of pursuit, indicating that it is useful for exhibiting by deduction (in the fashion explained earlier)<sup>431</sup> a thing's 'what-it-is', on the proviso that it happens in the following way, and in this way

<sup>429</sup> For ἀπλοῦς = 'indivisible' cf. *Met.* A 8, 989b17; Δ 3, 1014b5; *An.* I 2, 405a16. Detel II, 759.

<sup>430</sup> I.e. by the primitives themselves or by the attributes themselves; see *APo.* I 4, 73a34-b24.

<sup>431</sup> *APo.* II, chs. 5 and especially 13; cf. *APr.* I, ch. 31.

alone. At first glance, such divisions might seem of no use, since the divider rather seems to assume the thing's quiddity right from the start, without employing division. But the division has good sense when it comes to establishing the right order in the definiens expressing the thing's quiddity. For it makes a difference which of the appellations (τῶν κατηγορουμένων) conveying the different partial quidditative elements comes first, and which later. For example, 'animal tame two-footed' differs from 'two-footed animal tame'. Since any such collection is basically bipartite, the former formula refers to an animal which is two-footed *plus* tame, while the latter stands for a two-footed entity which is a tame animal, the principle of division being different. But if you proceed correctly the right order will come about, and hybrids will be avoided, such as those represented by the second formula, in which, quite unnaturally, two-footedness is presented as the hypokeimenon and animalhood as its attribute.<sup>432</sup>

Another use is that it will prevent us from omitting anything which is part of the quiddity (96b35-97a5). This does not mean that the user of division and the definer should be familiar with any member of the division. It suffices to see that one has reached the point where there is no further differentia; if this is the case, you have got hold of the thing's definiens (97a5-22).

Three rules are to be observed for establishing a definiens by means of division. You must (1) get the quidditative properties and their appellations (τὰ κατηγορούμενα ἐν τῷ τί ἐστι), (2) put these in the right order, and (3) make sure that they are complete. The first goal is attained by using the genus *plus* differentia topic, just as in the case of coincidental modes of being one can deduce their inherence. The second aim is achieved by taking the appellation that conveys the notion that is prior to all the others, and putting this in the first position; then, do the same for each of the others. The third, finally, will be reached by taking the differentiation which applies to the whole genus, assuming that one of the opposed differentiae falls to the thing under discussion; afterwards, take the subsequent differentiae until you reach a final whole (σύνολον) not further differentiable. In so doing, there is nothing superfluous (for all attributes are part of the quiddity), and nothing left out either; for you will have the genus with all the differentiae (97a23-b6).

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<sup>432</sup> For the incompatibility of such hybrids with Aristotle's basic ontology see *Int.* 10; my section 3.78.

Next, Aristotle (97b7-25) sets out to explain how to reach a thing's required definiens. The general procedure (97b7-15) is then illustrated. If we were to seek what high-mindedness (μεγαλοψυχία)<sup>433</sup> is we should inquire what one characteristic some proud men we know (e.g. Alcibiades, Achilles, and Ajax) have in common. This happens to be intolerance of dishonour. Thus the definiens of pride will be 'intolerance of dishonour'. To put it to the test, we should take two others, Lysander and Socrates. In their case, the common characteristic is rather their 'being indifferent to good and bad fortune'. Now take these two and look and see what these two definientia have in common. If there is nothing, there will be two sorts of high-mindedness.

The item 'universal vs. particular' also deserves our attention. As such, every definiens always applies universally (πᾶς ὅρος καθόλου); for the doctor does not say what is salutary for some individual eye but for every eye, or at least limiting his prescription to some sort of eye (97b26-28). On the other hand, it is easier to take a thing's particular occurrence as the object of your definition than the thing in general. That is why you should always proceed from particulars to universals. Besides, ambiguities, too, are harder to detect in universals than in what is undifferentiated.<sup>434</sup> Of course, Aristotle's view does not imply that particulars as such are to be defined,<sup>435</sup> but that the universal is exhibited by our starting from sense-perception and inducing it from particular instances.<sup>436</sup> Just as in a fully-fledged epistemonical proof syllogistic validity is essential, so in definitions there must be clarity.<sup>437</sup> And this will be reached if, through the stated particulars, one can define separately for each genus — e.g. if one defines similarity not for every particular instance of similarity, but for colour and for shape, and sharpness for sound — and can then proceed in this way to what is common, taking care not to become involved in ambiguities (97b28-37). Like ambiguity, the use of metaphorical terms should be avoided (97b37-39).<sup>438</sup>

<sup>433</sup> This virtue is discussed in *EN* IV, ch. 3.

<sup>434</sup> "The more general a term, the more easily its homonymy will escape our notice, because (presumably) we are likely to have to consider more cases of the more general term before we hit upon its homonymy". Barnes, 239; (1994), 249.

<sup>435</sup> *APo.* I 24, 86a11-13; *Phys.* I 5, 189a5-8; my section 9.74 in Vol. II.

<sup>436</sup> *APo.* I 1, 71a8-9; 2, 72a4-5; 18, 81b1-9; 31, 87b28-88a5; II 2, 90a28-30; my sections 2.71; 9.42 and 9.46 and 9.6-9.7 in Vol. II.

<sup>437</sup> Cf. *APo.* II 17, 99a11-15; *Top.* I 15, 106a12-20.

<sup>438</sup> Barnes (*ad loc.*) refers to *Top.* IV 3, 123a33-37; *SE.* 17, 176b14-25; *Meteor.* II 3, 357a24-32.

Chapter 14 deals with the use of division for correctly formulating the problem propositions to be investigated in their truly epistemonomic form.<sup>439</sup> What Aristotle is doing in this chapter is to advise the investigator to call to mind a sort of 'Porphyrian Tree' of the genera and species included in the subject-matter at hand, and to discover the widest class to the whole of which a certain appellation can be applied — this widest class then serves to mediate the assignment of this appellation to classes included in the widest class.<sup>440</sup> In view of the requirement that the appropriate appellation should commensurately apply to its substrate, ordinary language sometimes fails to provide us with the suitable term, while looking for a common name for the substrate to which the attribute under examination commensurately belongs, and only a phrase is available (98a13-19).<sup>441</sup> Barnes (240) rightly takes Aristotle to be referring at 98a13ff. to the method of contemporary biologists, who limit themselves to appellations deriving from attributes that are expressible by a single common term. At times, however, we can only postulate an anonymous common property of fulfilling this or that specific function (98a20-23), and use it as a purely formal description.<sup>442</sup>

In this chapter, too, focalization and categorization play a pivotal role, this time inasmuch as the correct formulation of problems specific to a given discipline are dealt with.<sup>443</sup> I shall confine myself to a passage which is quite illuminating in this respect. At 98a13-23 Aristotle argues that in hunting out the suitable attributes we must not limit ourselves to attributes signified by names that have been handed down but also pick out any other common characteristic observed, going under any other appellation whatsoever, and then consider to what objects it belongs, and what properties it entails. For example, in the case of horned animals, we should look for the property of having a manyplies and no upper incisors, and then ask what animals have the property of having horns. In this fashion, it will be shown that the *cum hoc* implies *propter hoc*, since it will come about

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<sup>439</sup> This particularly applies, of course, to proofs in which the qua-proposition is expanded into a syllogistic deduction.

<sup>440</sup> Ross, 663; Barnes, 239f.; (1994), 250f.; Detel II, 788-93.

<sup>441</sup> *PA* III 14, 674a22-b17; cf. 2, 663b31-664a3. The general procedure is recommended in *APr.* I, ch. 35.

<sup>442</sup> *PA* II 8, 654a19-26; *HA* IV 7, 532a31-b3. For comments, Barnes, 240 (1994, 250f.); Lennox (1987), 97-9.

<sup>443</sup> For their role in general, my section 2.72.

that the specified property belongs to these animals *because of* their being horned.<sup>444</sup>

The subsequent chapter (15) briefly discusses the occurrence of pairs of closely connected problems, whose ‘middles’ are identical or subordinate to one another, where the middles hold of different things (such as reflection of sound or of light), or hold in a different way (e.g. light *qua* bent by raindrops or by a mirror).<sup>445</sup>

### 6. 6 *Some questions concerning the ‘because’ device*

The next three chapters (16-18) deal with a cluster of problems surrounding the ‘because’ device, in particular the relationships between explanation and explanandum.

#### 6. 61 *On two different types of ‘because’: cause and effect*

Chapter 16 opens with a twofold question: Does a state of affairs brought about by another state of affairs imply the latter to be the case? And: If a state of affairs explicative of another state of affairs as brought about by it is really the case, does it then imply that the effect should be the case, too? If the entailment is reciprocal each of these states of affairs can be used to ascertain the existence of the other.

The problem area has everything to do with the ambivalent meaning of the pair αἴτιον – αἰτιατόν, which may indiscriminately stand for ‘what is causative’ and ‘what is caused’ and for ‘what is explanatory’ and ‘explanandum’.<sup>446</sup> What Aristotle aims to make clear in this chapter is that from the viewpoint of ‘being certain’ of some causally related things, our being certain of either of them implies our certainty about the other, but that the nature of this certainty differs, according to the difference between epistemonical proof (from the

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<sup>444</sup> *PA* III 2, 663b31-664a3, where it is claimed that the extra material for the horns is secured at the cost of the upper front teeth (664a1: “For nature by subtracting from the teeth adds to the horns”). As for that, the deficiency of teeth is compensated for by nature by amplifying the digestion equipment (*PA* III 14, 674a22ff.).

<sup>445</sup> For an assessment of this procedure as involved in Aristotle’s scientific works, Ross, 664f.; Barnes, 241; (1994), 252; Detel II, 795f.; Lennox (1987), 95-7.

<sup>446</sup> It is noticeable that Aristotle uses the neuter substantivated adjective αἴτιον, not the substantive αἴτια.



cause), which leads to genuine knowledge of the inference from cause to effect, and mere exhibition (starting from the effect), merely making us familiar with its cause.

For instance, let *A* stand for ‘shedding leaves’, *B* for ‘being broad-leaved’, and *C* for ‘being a vine’. Then given that *A* belongs to *B* (for everything broad-leaved sheds its leaves) and that *B* belongs to *C* (for every vine is broad-leaved), then *A* belongs to *C* and every vine sheds its leaves. *B*, the middle, is explanatory (98b5-10). But the reverse procedure seems equally possible, consisting in ‘proving’ that a vine is broad-leaved from its shedding leaves (98b10-16). While earlier he had spoken (98b5: δεικνύοιτο δι’ ἀλλήλων) of reciprocal δειξίς, Aristotle now uses the verb ἀποδείξαι (98b11-12). In the subsequent discussion (98b16-24), however, he makes clear that in this case there is only a ‘becoming familiar’ (98b24: γνωρίζεται), not genuine knowledge, since the supposed middle (‘shedding its leaves’) does not represent the ontic cause (the real ‘because’, τὸ διὰ τί), but merely makes you know *that* something is the fact, but not *why*. Thus there is only exhibition of a fact, not a genuine proof.

Putting it otherwise, in the reverse procedure from effect to cause we are surely able to explain *why we are familiar* with the existence of the causal state of affairs, but we do not know the *why* of this state of affairs itself, whereas the road from cause to effect provides us with genuine knowledge of the why of the effect. The different ways of cognition concerning causes and effects are illustrated by the well-known example of the lunar eclipse. Aristotle starts by qualifying the ambivalent notion of αἴτιον:

*APo.* II 16, 98b16-24: But given the fact that it is not possible for things to have a mutual causative relation — for the cause is (logically) prior to its effect, like (καὶ)<sup>447</sup> the interposition of the earth is the cause of the eclipse, and not the other way round — so, given that the proof by means of the cause is about the reasoned fact, while the one<sup>448</sup> proceeding not through the cause is merely about the fact, you are aware that the earth is in the middle but not why. And that the eclipse is not the cause of the earth’s interposition but the latter of the eclipse is evident; understandably enough, for (γὰρ)<sup>449</sup> its being interposed is an element in the definiens of ‘eclipse’. Hence it is clear

<sup>447</sup> The καὶ being expegetically used introduces the well-known illustration.

<sup>448</sup> In fact not a genuine proof (ἀπόδειξις) but a mere exhibition (δείξις), but the suggested suppletion of the preceding ἀπόδειξις is less inappropriate than it might seem, since in either case the word ἀπόδειξις may primarily refer to the deductive procedure the proof and the exhibition have in common.

<sup>449</sup> For this elliptical use of γὰρ see my *Index* s.v.

that the latter becomes familiar through the former, and not the former through the latter.

One should not underestimate the fact that, all things considered, the reverse procedure does make us aware of the presence of the causal state of affairs, so that from then onwards, a genuine epistemonik proof can be set in motion, since we have its pivotal ingredient, the 'middle', at our disposal under the appropriate appellation. So there are good reasons for testing the validity of the reverse procedure, asking whether it is perhaps possible for one and the same effect to have several causes. This is what Aristotle goes on to ask in the last paragraph (98b25-38). He begins by explaining the possibility of answering the question in the affirmative:

*Ibid.* II 16, 98b25-31: Supposing the same thing can be said of more than one subject as its primitive substrate (πλειόνων πρώτων), let then *A* belong to *B* primitively and to *C* as its other primitive substrate, and these two belong to *D* and *E* (respectively). Then *A* will apply to *D* and *E*, the causes being *B* and *C* respectively. Hence the presence of the cause necessarily implies the state of affairs (τὸ πρᾶγμα) brought about to be the case, while the latter's being the case does not necessarily imply this for everything which might be its cause, for something indeed, but not for the whole range (of possible causes).

This supposition is then rejected, however, by reminding us of the special requirement discussed as early as in the opening chapters of Book I, to the effect that the attribute should apply to the substrate commensurately (καθ' ὅλου), not only universally (κατὰ πάντος) and essentially (καθ' αὐτό). The rejection of what is proposed in the previous passage (98b25-31) is introduced by the pregnant formula ἥ in the sense of 'Or should we rather say that ...?':<sup>450</sup>

*Ibid.* II 16, 98b32-38: Or should we rather put it thus? Given that the 'problematic' attribute always commensurately (καθ' ὅλου) applies <to its substrate>, both that which is explanatory is some whole and that which it is explanatory of is something commensurate (to it). For example, to be shedding its leaves is appropriated to some whole. And if there are sorts of this whole, this property belongs to these commensurately, viz. to <them qua> plants or <qua> plants of such and such a sort. Hence in these cases, the middle, too, must be commensurate to<sup>451</sup> that which it is explanatory of, and convertible with

<sup>450</sup> For the use of the interrogative ἥ introducing a more likely alternative (cf. Tricot: "Ne serait-ce pas plutôt que") see e.g. *Mem.* 1, 450b20; *Sens.* 7, 448b22, and Bonitz, *Index*, 313a7-11. Pace Barnes (242; 1994, 253) the argument is not that aporetic that it is useless to seek in it Aristotle's considered view of the matter.

<sup>451</sup> The Greek has ἴσον καί = 'equal to', i.e. 'semantically equivalent'.

it. For instance, why do trees shed their leaves? Well, if it is because of the coagulation of their moisture,<sup>452</sup> then if a tree is leaf-shedding there must be coagulation; and if there is coagulation — not in anything whatsoever but in a tree — there must be the property of leaf-shedding.

As will appear below, πρόβλημα in this context must stand for the attribute involved in the problem sentence, just as κατάφασις ('affirmation') is often used for 'affirmative attribute' (my section 2.21), or συμπέρασμα for the substrate or the attribute as assigned to the substrate in a syllogistic conclusion.<sup>453</sup> As to the expression καθόλου, Barnes refuses (in his first edition, 242) unlike the majority of the commentators, to take it as used at 98b33 and 34 to refer to the notion of 'commensurately universal', although he deems the argument "scandalously invalid" if you make Aristotle speak of just universal quantification ('Every [x] is [y]'), and he agrees that the commentators' manoeuvre makes Aristotle's argument valid.<sup>454</sup> But, more importantly, Barnes seems to ignore that (a) anyhow it would be strange to assert that problems are *always* universal (if so, what about a problem such as 'Is this noise in the clouds thunder or not?'), and (b) in *Top.* Aristotle explicitly recognizes two sorts of problems, the universal and the partial ones.<sup>455</sup> On the other hand, Barnes may be surprised to see that the aforesaid commentators share his taking the word καθόλου used at 98b32 to stand for 'universal'. Anyway, Aristotle's argument makes perfect sense if throughout this argument we read καθ' ὅλου, which literally means 'said of the whole <of the thing's quiddity>' or 'commensurately applying' (my sections 6.34 and 6.71).

Another difficulty may arise at 98b33-34 concerning the meaning of the phrase ὅλῳ τινὶ ἀφωρισμένον. Ross (666) has: "assigned to a certain whole"; Barnes (*ad loc.*): "determined to some whole";

<sup>452</sup> Viz. at the junction of the leaf-stalk; cf. 18, 99a29, and Philoponus CAG XIII-3, p. 430<sup>9-12</sup>.

<sup>453</sup> Verdenius (1981), 348.

<sup>454</sup> Barnes (*ibid.*) is still of the opinion that the manoeuvre leaves Aristotle's premisses "in dire need of support: why ever should we think that all problems are 'universal' in the sense of 'commensurately universal'?" The answer should be: Because in I, chs. 4-5 we are told to do so. In the revised edition Barnes (1994, 253) presents some tentative interpretations of the fact that "the middle term and what is explanatory of ... must convert". But what is the difference between 'convertible' and 'commensurately applying'?

<sup>455</sup> *Top.* II 1, 108b34-109a1, analogically to the distinction between two sorts of statements in *Int.* 7, 17a38-39.

Tredennick (247): “appropriated to a subject as a whole”; Jenkinson (Oxford Translation): “belonging exclusively to a subject which is a whole” (cf. Tricot, *ad loc.*). They all fail to associate this ‘whole’ (ὅλον) with the key term καθ’ ὅλου, and to link up the notion expressed by the perfect participle with the notion of commensurability expressed by καθ’ ὅλου. We should rather take the verb ἀφορίζειν to allude to the notion of ‘marking off’ or ‘adapting’ found in selecting the precise appellation for the substrate in order to realize the commensurate relationship between the substrate underlying the phenomenon to be investigated and the intended attribute. In line with this interpretation, the ὅλον τι must stand for the whole of the thing’s quiddity if it is brought up under the correct appellation.<sup>456</sup>

On this reading of the text, we may implement it in some way like this: An attribute like ‘leaf-shedding’ used in the problem sentence to be epistemically proved, ‘Are these plants shedding their leaves, or are they not?’ must always commensurately apply to the substrate, that is to say, it must precisely match the whole of the constituents of the substrate’s appellation. This holds good even if the plants are of different sorts, say, oaks and plane trees etc.; if so, the attribute commensurately applies to them taken under the appellation ‘plant’ as well as ‘such-and-such a plant, e.g. oak or planetree. Continuing this case, you may ask (in order to discover the appropriate middle): ‘Why are trees deciduous?’ Well, if the reason *why* is the fact that their sap coagulates at the junction of the leaf-stalk, then you can reason thus: ‘If this entity (‘plant’, ‘tree’, ‘oak’, ‘plane tree’, and so on) is leaf-shedding, there must be coagulation; and if there is coagulation in this entity — not in its capacity of being anything whatsoever, but precisely qua tree (‘oak tree’, ‘plane tree’) — it must be deciduous. As a matter of fact, the middle (‘being broad-leaved’), which is the cause of the mode of being expressed by the attribute, ‘leaf-shedding’, must also apply commensurately to the substrate when it is brought up by an appropriate appellation ‘tree affected by sap coagulation’ or ‘broad-leaved tree’. Whatever appellation is used, it should always comprise the totality of quidditative elements, without omitting some of them, by calling it just ‘entity’ or ‘tree’ or

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<sup>456</sup> At ch. 17, 99a34-35, the commensurate universal is called ‘primitive universal’ (πρῶτον καθ’ ὅλου): “I call primitive universal that with which severally the appellations are not convertible, while, when taken all together, they are convertible and co-extensive with it”. The notion of primitive universal is also found in *APo.* I 5; my section 6.34.

‘something affected by congealing of its moisture’ (which may also refer to a human being in Siberia), and so on.

A corollary of the argument is that what at first glance might seem two or more different causes, in fact are one cause, the property of ‘being broad-leaved’ being essentially linked up with that of ‘being affected by sap coagulation at the junction of the leaf-stalk’.

#### 6. 62 *On using different ‘middles’*

The presence of an essential link is of vital importance, as is also clear from the next two chapters (17 and 18), in which this idea is worked out. It is shown that in cases in which proofs are accomplished by taking a substrate’s or attribute’s coincidental mode of being, different causes may appear to produce the same effect, and, accordingly, one and the same attribute may be proved of a substrate by means of different middles. But then the ‘proofs’ are not strictly epistemonik. Such cases proceed from a sign (99a3: κατὰ σημείον) or from a coincidental mode of being (99a4-5: κατὰ συμβεβηκός).<sup>457</sup>

Chapter 18 briefly discusses an interesting detail of the epistemonik procedure, asking (99b8-12) which of the ‘middles’ or mediating states of affairs is explanatory for the particulars — to wit, in cases in which there are several essentially connected (i.e. subordinate) middles — the one that is immediately related to the primitive universal, or the one immediately related to the particular instantiation? Clearly it is the one nearest to the particular instantiation as found in the substrate it is explanatory of. For it is this one which explains the primitive’s having the commensurate attribute. For example, taking the modes of being A, B, C, and D, C is explanatory of D’s having B, and therefore of its having A, whereas B is explanatory of C’s having A and of itself having A (99b12-14). Philoponus aptly implements Aristotle’s abstract illustration with the example of the deciduous trees.<sup>458</sup>

#### 6. 7 *The καθ’ ὅλον requirement re-assessed*

In order to understand the substantial impact of these chapters one should pay some more attention to what Aristotle has remarked in

<sup>457</sup> Chapter 17 is commonly regarded as an alternative, fuller and more detailed draft of ch. 16, 98b25-38. Ross, 669-73; Barnes, 243-6; Detel II, 810-22.

<sup>458</sup> CAG XIII-3, p. 431<sup>29-32</sup>; cf. Themistius, *Anal. Post. paraphrasis*, 62<sup>11</sup>ff.

the foregoing chapters about the nature of the epistemonik procedure as the proper context in which the attribute-hunting takes place. The key-role in this procedure is played by what we have called earlier (my section 6.34) the καθ' ὅλου requirement.

6. 71 *Once more, καθ' ὅλου vs. καθόλου*

In order to gain a clear understanding of Aristotelian epistemonik proof, a thorough discussion of the *caveats* the author brings forward (in I 5) on account of the καθ' ὅλου requirement will come in handy. Let Aristotle speak for himself:

*APo.* I 5, 74a4-13: It must not escape our notice that it often happens that one makes mistakes in that<sup>159</sup> what one is trying to make clear (δεικνύμενον)<sup>460</sup> does not belong primitively and commensurately <to the object> in the sense in which one thinks that it is being evidenced (δείκνυσθαι) commensurately and primitively. We make this error when either (1) we cannot grasp anything higher apart from the particular or the particulars,<sup>461</sup> or (2) we can, but it has no name applying to the specifically different object, or (3) that <feature> with regard to which it [i.e. the attribute] is evidenced is in fact a partial whole.<sup>462</sup> For the attribute under demonstration<sup>463</sup> will <then> surely belong to the particulars <of that whole>, and hold of each of them, but nevertheless not of it [i.e. the whole] *qua* primitive subject commensurately — I speak of an attribute holding of that <whole acting as substrate to the attribute> as of its primitive substrate and as such whenever it holds of it primitively and commensurately.

Next follow some examples, all taken from mathematics,<sup>464</sup> among which the well-known triangle-isosceles example, which is very instructive indeed. Supposing there were no triangle except the isosceles, Aristotle argues, then the attribute of 'being 2R' would seem

<sup>159</sup> I take the καί to be used epexegetically.

<sup>460</sup> The Greek participle is used *de conatu*. It refers to the attribute (i.e. the predicative part of the conclusion to be proved), rather than to the conclusion itself.

<sup>461</sup> A feature or quality of the object is intended that has a wider extension than the particular term by which the object is referred to.

<sup>462</sup> I.e. only *part* of a whole ranging over the particular domain.

<sup>463</sup> My rendering of ἀπόδειξις, which is the grammatical subject of the verb ὑπάρχειν. Note that when construed with the dative case, throughout *APr.* and *APo.* this verb is used in its technical sense ('to belong'). The word ἀπόδειξις should, therefore, be taken to mean the *content* of the proof ('that which is being proved'), not the demonstration as a procedure; semantic Main Rules RIR and RMS (my section 1.71).

<sup>464</sup> Guthrie (1981), 177f., has an interesting remark on the possible deeper roots of Aristotle's use of mathematical examples. See also Kullmann (1981), 245-70; Leszl (1981), 271-328; Detel I, 189-232.

to belong to the isosceles qua isosceles. Now to think so would be a mistake, he means to say, because the property of 'being 2R' belongs to the isosceles only in virtue of *part* of its nature, its being a triangle, that is. Notice that in the supposed case we probably would not have had the word 'triangle' at our disposal, so that the appropriate segment of the isosceles's nature that is commensurate to the 'being 2R' property would be what Aristotle has designated earlier (I 5, 74a8) as ὀνόνημον ('nameless'). On the other hand, given the existence of appropriate names applying to the diverse kinds of 'triangle' ('equilateral', 'scalene', 'isosceles'), one can make clear of the particulars of each sort separately that they are all 'being 2R'. However, the investigator then still does not truly know that this property is commensurately related to one special part of their respective natures, i.e. their 'triangularity':

*Ibid.* I 5, 74a26-31: For this reason, even if you make clear (δείξει) of each triangle — either by one or by different proofs — that each is 2R, separately of the equilateral and the scalene and the isosceles, you still are not aware (οἶδε) — except in the sophistic fashion — that the triangle is 2R, nor <are you familiar with this attribute as> holding of 'triangle' commensurately<sup>465</sup> nor even <are you aware> whether<sup>466</sup> there is any other <kind of> triangle apart from these.<sup>467</sup> For you are not familiar, then, <with the attribute as holding of the object> *qua* triangle, nor even <as holding of> every triangle, except in a numerical sense, but not <as holding of> every triangle taken as a species, even if <in fact> no single instance <of 'triangle'> has escaped your notice.

## 6. 72 *On the epistemonik procedure properly accomplished*

The final section of this chapter (74a35-b4) aims to clarify the epistemonik procedure as actually accomplished by a competent investigator. Aristotle puts forward two procedural questions<sup>468</sup>:

<sup>465</sup> Ross rightly reads at 74a29 the genitive τριγώνου, with our oldest manuscript, the ninth-century codex Ambrosianus 490 (olim I. 93), while the other editors prefer the reading of the other MSS (τρίγωνον). Ross is right in printing the two-word phrase καθ' ὅλου instead of the common reading καθόλου.

<sup>466</sup> The sentence οὐδ' εἰ... etc. is commonly rendered "nor even if there is no other ...etc.", which does not make sense in this context, I presume. Moreover, this rendering would require an irrealis construction with the verb ἦν instead of ἔστι, as is actually the case at 74a17 ("if there were no triangle except the isosceles").

<sup>467</sup> Viz. the specific ones, equilateral, isosceles etc.

<sup>468</sup> In my view, rather than three questions (as is commonly assumed) there are only two, the second of which is twofold. Notice that the answer given at 74a37ff. refers to the 'when' of the second question, while the putative 'what' (following the

(1) Does the property belong to the object *qua* triangle or *qua* isosceles?

(2) *When* does it, in virtue of this, belong to it as its primitive substrate, and does the attribute under demonstration<sup>469</sup> commensurately hold of something?<sup>470</sup> The second, decisive question is answered, and the answer exemplified, as follows:

*Ibid.* I 5, 74a37-b4: Clearly, <the latter is the case> whenever after subtraction <of the irrelevant features> it [i.e. the attribute] belongs <to the substrate> as its primitive <substrate>. For example, 'being 2R' will belong to the bronzen<sup>471</sup> isosceles triangle —(but <this applies> equally well when 'being bronzen' and 'being isosceles' have been subtracted; but not when 'figure' or 'limit' have been.)— However, they [i.e. 'being bronzen' and 'being isosceles'] are not primitive <features>.<sup>472</sup> What, then, is the primitive <feature>? Well, if <the 'being 2R' property is taken to hold> of 'triangle', it is in virtue of this [i.e. 'triangularity'] that it also belongs to the others,<sup>473</sup> and it is of the latter [i.e. 'triangle'] that the attribute under demonstration holds commensurately.

The initial procedure of acquiring 'genuine knowledge' (ἐπιστήμη) may now be described as follows. The senses (aided by experience) produce some sensation, which is then presented to the intellect as an as yet unanalysed phenomenon. This phenomenon is nothing but a sensory state of affairs (πρᾶγμα = 'a thing's-being-so-and-so'), which, from the logical point of view, is a complex significate referring to an object of the outside world including its manifold states or 'appurtenances'.<sup>474</sup> Take for example some bronzen three-sided figure (which in fact is, say, an isosceles); let it be sensorily perceived by somebody as a bronzen equilateral figure (the corresponding state of affairs being 'that-there-is-an-equilateral-figure').<sup>475</sup> Supposing one wishes to prove that the attribute 'being 2R' holds good of this object, the

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usual reading τίνας at 74b2) of the supposed third question is not answered at all.

<sup>469</sup> For this rendering see above, my note 463 and Index s.v.

<sup>470</sup> Reading at 74a37 καθ' ὅλου τινός ἢ ἀπόδειξις, taking τινός as an indefinite pronoun instead of the common reading of the interrogative pronoun (τίνας). As is well-known, Greek MSS do not distinguish between these readings.

<sup>471</sup> In availing myself of this archaism I follow Bostock (1994), 12ff.; 130ff.

<sup>472</sup> They are not primitive features of the object as far as the attribute 'being 2R' is concerned.

<sup>473</sup> The equilateral, scalene, and isosceles.

<sup>474</sup> For this term as comprising both actions and states see De Rijk (1986), 196-202, esp. 197, n. 16.

<sup>475</sup> Of course, it could just as well be perceived as merely 'something bronzen' or 'something heavy'.



investigator should first of all observe the  $\kappa\alpha\theta'$  ὅλου requirement by reducing the phenomenon to a substrate-attribute complex in such a way that the attribute under discussion corresponds precisely to the substrate term. In order to get this result he should try to define the phenomenon adequately by enumerating all its constitutive elements. Next, by taking away all the notions that prove to be irrelevant to the property under discussion ('being 2R'), he should categorize the object as 'triangle', because 'being 2R' exactly ('commensurately') matches the object's triangularity. In other words, the investigator should name the object in such a fashion that it can feature in the epistemonik procedure, which requires an essential relationship between the property under discussion and the initial phenomenal object. Thus he should no longer name the object a 'bronzen figure' or a 'heavy thing', or the like.<sup>476</sup> As we have remarked before,<sup>477</sup> even such impressive scientific names as 'equilateral' or 'isosceles' will not do, because they do not *commensurately* match the 'being 2R' attribute.

When the investigator next frames the epistemonik syllogism or deduction, he should use the formula in which the property 'being 2R' is assigned to the object designated by the name that commensurately corresponds to this property ('triangle' or 'triangular figure') as 'middle'. In the major proposition as well as in the conclusion the object can be designated by whatever name you like. So the corresponding syllogistic scheme may be set out thus:

*Preliminarily:*

'There-being-this-thing' may be defined as, say, 'there-being-a-heavy-bronzen-three-sided-mathematical-isosceles-figure'.

*After taking away the notions of 'bronzeness', 'heaviness' etc. as well as 'isosceles' etc. as all being irrelevant to the property of 'being 2R', a syllogism may be framed thus:*

“‘Triangularity’ belongs to this bronzen (etc.) thing;

‘Being 2R’ commensurately belongs to ‘triangle’;

Therefore ‘being 2R’ belongs to this bronzen (etc.) thing *qua* triangle’.

<sup>476</sup> In this connection, one should recall the purpose of ch. I 5, especially Aristotle's remarks at 74a38-b2. Some lines before, at 74a17ff., he points out that the lack of an appropriate categorization (διὰ τὸ μὴ εἶναι ὀνομασμένον at 74a21) will frustrate any true apodeixis. See my section 2.1.

<sup>477</sup> See my section 2.1.

6. 73 *The commensurate universal. Intension vs. extension*

The doctrine of the ‘commensurate universal’ plays a pivotal role, as is not only made clear by Aristotle’s expositions in Book I, chs. 4-5 but on many other occasions as well where the  $\kappa\alpha\theta’\ \acute{\omicron}\lambda\omicron\upsilon$  requirement is in order. Barnes is plainly wrong in thinking (247f.; 1994, 258f.) that the doctrine of the commensurate universal is not explicit in Aristotle (re I, chs. 4-5), and in deeming its terminology not Aristotelian. The arguments adduced by Barnes (*ibid.*) as presenting “excellent evidence that Aristotle did not adhere to the doctrine of the commensurate universal” are based on the erroneous assumption that the requirement of the commensurate universal should concern the syntax of sentence predicates instead of the semantics of specified appellation (whether or not accomplished by using the qua-functor).

For example, in order to prove the truth of ‘this isosceles is 2R’, the  $\kappa\alpha\theta’\ \acute{\omicron}\lambda\omicron\upsilon$  requirement demands that you should bring up the object (say, a tympanum that has the mathematical form of an isosceles) by the appellation, ‘being a triangle’, which is commensurate to the attribute ‘being 2R’, and then use this appellation as ‘middle’, thus:

‘Every triangle is 2R  
every isosceles is a triangle  
therefore, every isosceles is 2R’,

which entails the partial conclusion to be drawn by using the qualification, of which the syllogism is in fact an expansion:

‘This tympanum/isosceles is qua triangle 2R’.

What Aristotle has in mind is what we have called ‘focalization’: the intension of ‘tympanum/isosceles’, for the sake of argument, should be reduced to the notion of ‘triangularity’, because this part of its intension is the proper cause (the ‘because’) of this tympanum/isosceles’s being a 2R thing. This by no means makes ‘tympanum/isosceles-qua-triangle’ coextensive with ‘triangle’ or ‘2R thing’, as the former still has a narrower intension than the latter.

Some more can be said about the relationships between the ‘extensional’ device  $\kappa\alpha\theta\acute{\omicron}\lambda\omicron\upsilon$  (‘universally applying’) and the ‘intensional’  $\kappa\alpha\theta’\ \acute{\omicron}\lambda\omicron\upsilon$  (lit. ‘applying to the whole of the intension’). In the one-word expression  $\kappa\alpha\theta\acute{\omicron}\lambda\omicron\upsilon$ , the element  $\acute{\omicron}\lambda\omicron\upsilon$  bears on the ‘whole’, i.e. complete, collection of the members of the class referred to by the concept in question, whereas in the phrase  $\kappa\alpha\theta’\ \acute{\omicron}\lambda\omicron\upsilon$  the

ὅλον concerns the complete collection of its quidditative constituents.<sup>478</sup>

The adverb ὅλως likewise has a twofold connotation. For instance, in the *Lexicon*, at *Met.* Δ 26:

*Met.* Δ 26, 1023b26-32: We call a whole both that of which no part is absent out of those of which we call it a whole naturally; and what contains its contents in such a manner that they are one thing; [...] For what is 'universal' (καθόλου/καθ' ὅλου), i.e. that of which we speak when we say 'wholly' (ὅλως), implying that there is in a sense a whole, is [1, extensionally] universal as containing several things, by being said of each of them, and [2, intensionally] by their all — to wit, each one — being taken as one thing, like, for instance, 'man',<sup>479</sup> 'horse', 'god', because they are all animals.

In *An.* I 1, 403a7 the adverb ὅλως is used with the intensional and extensional connotations intermingled, thus connecting several closely related notions ('anger', 'courage', 'desire') and subsuming them, so to speak, under their common generic concept 'sensation' ("and gener(ic)ally, sensation").<sup>480</sup> Such generic concepts both comprise (in terms of intension) part of the intension of the specific concepts and (in terms of extension) stand for the class of all things falling under the specific concepts. Generally speaking, unlike modern logicians, the Ancients did not take the extensional approach<sup>481</sup> to be a fortunate solution to intricate problems surrounding the intensional approach, particularly the problem of the universal. In the Ancient (and the current Medieval) view, the extensional aspect of the use of concepts is secondary to the intensional one, in that something's belonging to a class is explained as a result of its possessing a certain property, so that, in modern terms, the Ancients' approach does not oppose the extensional approach to their basic intensional view.<sup>482</sup>

<sup>478</sup> For a similar use of γένος, both extensionally and intensionally, see *Long.* 1, 465a3-12.

<sup>479</sup> Note the accusatives. The fact that men, horses etc. are animals allows us to appellate each of them by using that part (viz. 'animality') of their intension. Incidentally, gods are here counted as animals, (= 'animate beings').

<sup>480</sup> Cf. *APr.* I 13, 32b7; *Sens.* I, 436a9; *EN* I 2, 1095b5. Bonitz, *Index*, 505b46-48: "ὅλως ab enumeratis singulis rebus transitum parat ad universum genus".

<sup>481</sup> I.e. the approach to logical problems which, roughly speaking, confines attention to truth-values of sentences in which concepts occur rather than to their meanings taken by themselves, in other words, to denotation rather than connotation. Thus in terms of quantification, e.g., Socrates's being an animal is understood as his belonging to the class of animals, not in terms of his possessing this specific property signified by the word 'animal'.

<sup>482</sup> Mignucci (1965), 81f.

6. 8 *How do we apprehend the 'starting-points' (ἀρχαί)?*

The final chapter of the *Analytics* is about how we can apprehend the 'starting-points' (ἀρχαί) or 'immediates' (ἄμεσα)<sup>483</sup> which are indispensable for any epistemonical proof to get off the ground. As early as in Book I, ch. 3, Aristotle argued that not every knowledge is apodeictic, and opposed the awareness (γνώσις) of 'immediates' (ἄμεσα) to genuine knowledge (ἐπιστήμη). And at I 9, 76a19-22 he claimed that one who knows something from higher ἀρχαί knows the object better; for instance, he knows it to be the effect of a cause which is itself uncaused. Such knowledge is of the highest possible kind, and depends on there being certain 'immediates' or 'starting-points', which have turned out earlier (72b19-25) to be unprovable themselves, yet accessible to what is called "some principle of knowing (ἀρχὴν ἐπιστήμης τινά) owing to which we become familiar with the appropriate definitia". It is this familiarity with the immediates and starting-points which will be discussed at length in the last chapter of *APo.*, not so much, that is, as a cogent explanation of our apprehending starting-points, but rather as a description of how apprehension actually takes place.<sup>484</sup>

The chapter at present under consideration divides into two main parts. In the opening section (99b15-26) two basic questions concerning the fashion in which we become familiar with the starting-points are addressed (99b18), followed by a pair of puzzles (99b22-26), which are said to be preliminary to the aforesaid basic questions. The second main section, which covers the remainder of the chapter (99b26-100b17), advances, in light of the two preliminary puzzles, an extensive discussion of the two initial questions, including the elucidation of Aristotle's own position concerning the starting-points and immediates.

The two initial questions are introduced by an assessment of the general theme they are about, within the framework of all the investigations carried out in the *Analytics*:

*APo.* II 19, 99b15-19: Now as for deduction (συλλογισμοῦ) and proof, it is evident both what each is and how they come about — and at the

<sup>483</sup> At 99b21 the starting-points are called 'the primitive, immediate starting-points'. Also my section 6.36.

<sup>484</sup> See the lucid comments on *APo.* II 19 in Engberg-Pedersen (1979, 314-8), who refers to Aristotle's remarks at 100a13-14: "and the soul is in fact such that it is capable of undergoing this". Otherwise Hamlyn (1976), 175-80.

same time this goes for genuine knowledge too (for that comes to the same thing). But as for the starting-points (τῶν ἀρχῶν) — (1) how they become familiar (γίνονται γνώριμοι) and (2) what is the cognitional habitus (νοῦς)<sup>485</sup> involved — that will be clear from what follows, when we have first set out some preliminary puzzles.

Noticeably, Aristotle does not speak of any acquiring 'genuine knowledge' (ἐπιστήμη) as far as starting-points are concerned. They rather somehow 'become familiar',<sup>486</sup> which makes the problem of exactly how our awareness of them is acquired the more urgent. For this much is certain, epistemonik knowledge can only be acquired if it is based upon awareness of primitive, immediate starting-points (99b20-22; cf. I 1, 71a1-17 and 2, 72a25-b4).

Next the two preliminary puzzles introduced at 99b17-19 are raised, which are apparently meant to prepare Aristotle's answer to the two initial questions, by making them more explicit:

*Ibid.* II 19, 99b22-27: With regard to the perception (γῶσιν) of the immediates, one might puzzle (1) whether it is the same or not the same (as that of 'mediated' things), that is to say (καὶ)<sup>487</sup>, whether there is or is not genuine knowledge of each group, or rather genuine knowledge of one (i.e. the mediated things) and some other kind of thing of the other; and also (2) whether the states (of awareness) come about in us, not being present before, or whether they are present in us without being noticed.

Evidently, the first puzzle aims at differentiating the first question about the starting-points (99b18: 'How do they become familiar?'), by asking more specifically whether this takes place in the same way as with the 'non-immediates', i.e. whether of both groups there is genuine knowledge (ἐπιστήμη), or only of one, whereas of the other there is a different kind of acquaintance (to be indicated by words like γῶσις). The second initial question (99b18: 'What is the cognitional habitus (ἐξίς) involved?') is taken up and likewise differentiated by the second puzzle.

<sup>485</sup> Since the term νοῦς is indiscriminately used to stand for both a cognitive faculty or capacity and a certain cognitional state resulting from the actualisation of this capacity, I render it (following Tricot, 241, n. 2) 'habitus', which at least comes close to the Greek word's etymology, ἐξίς being the verbal noun from ἔχειν. (A similar semantic ambivalence is found in its Dutch counterpart 'hebbelijkheid'). In fact, the ἐξίς are 'states and attitudes'. Seidl (1971, 83) rightly speaks of "Erkenntnishaltungen" ('cognitional attitudes'). My rendering will be argued for in my section 6. 83.

<sup>486</sup> Cf. the use of γινώσκειν at 72b24-25; 99b28, and γῶσις at 99b22 and 29.

<sup>487</sup> As is often the case in Aristotle, καὶ is used epexegetically, so that it does not introduce another puzzle.

Next Aristotle sets out to answer the initial questions in light of what was alternatively suggested by the two preliminary puzzles. The kernel of his answer consists in the rejection of any idea of pre-existent 'knowledge' (including Platonic anamnesis), and the introduction of the notion of 'cognitive capacity'. Noticeably the 'either-or' device underlying the second puzzle (99b25-26) is aptly replaced by a 'both-and':

*Ibid.* II 19, 99b26-34: Well, if we have them this is absurd; for then it follows that we have pieces of cognizance (γνώσεις) which are more certain than epistemonik knowledge and yet go unnoticed. If, on the other hand, we acquire them without possessing them earlier, how could we become familiar with them and learn them except from pre-existing cognizance (γνώσεως)? This is impossible, as I said (71a1-17) in the case of the apodeictic process (ἀποδείξεως) too. It is evident, then, that we both cannot possess these habitus and that they cannot come about in us when we are both ignorant and have no habitus either. Necessarily, therefore, we have some sort of capacity, but not one which will be more valuable than the aforesaid things [i.e. the epistemonik means] with regard to certainty.

Thus Aristotle has roughly marked off his own position. Next it should be further assessed in a broader context. Aristotle (99b34-100a3) explains that all animals have such a capacity, an innate faculty of discernment, called 'sense-perception'. Now in some animals there is retention of what is perceived, owing to their having the capacity of retaining it in their mind. And if this happens repeatedly, then a difference comes about, so that some animals come to gather a coherent account from the retention, while others do not.

In a similar way to *Met.* A 1 (980a27ff.) the gradual development of several forms of cognizance and their elaborations is pictured.<sup>488</sup> From perception there arises memory, from repeated memory of the same thing experience, and from experience comes a starting-point for skill and knowledge. The role of the process of universalizing is particularly interesting:

*Ibid.* II 19, 100a3-9: So from perception there comes memory, as we call it, and from memory, when it occurs often with regard to the same item, experience; for memories that are many in number from a single experience. And from experience — or rather from the universal impression's coming as a whole (παντός) to rest in the mind,<sup>489</sup> in

<sup>488</sup> The stages of this 'genetic epistemology' (Hamlyn) are extensively discussed in Barnes, 250-4; (1994), 261-5, and Detel II, 831-4; 848-52.

<sup>489</sup> Cf. Plato, *Phaedo* 96B (cf. *Phaedrus* 249B); Ross, 677; Tredennick, 258, note a, who refers to *Phys.* VII 3, 247b11-12., where Aristotle hints at an etymological

that some one thing comes about apart from the many, viz. whatever is one and the same in all those things — there develops a starting-point for skill and for knowledge, for skill in the domain of becoming, for knowledge in that of what is.

It might be clear enough now that what, qua being innate in us, precedes the acquisition of genuine knowledge is not something determinate already there, but rather something that develops gradually. The conceptual similarity found in the repeated experiences makes them condense, so to speak, to a universal notion. Aristotle thinks it is a good idea to use an appealing military simile (a picturesque comparison to soldiers regrouping after a rout) to make clear that all these stages develop from one initial step, which gradually leads to the eventual outcome:

*Ibid.* II 19, 100a10-14: Thus the *habitus* neither are present in us in a determinate form, nor come about from other *habitus* that are of a higher level of cognition (γνωστικωτέρων); rather they come about from sense-perception. Like in a battle when a rout has occurred: first one man makes a stand, then another does and then still another, until a position of strength (ἀλκήν)<sup>490</sup> is reached.<sup>491</sup> And the mind is such as to be capable of undergoing this.

Then, the battle metaphor is applied to the mental process, leaving no room for any imprecision:

*Ibid.* II 19, 100a14-b5: What we have just now said but not said clearly, let us state again. When one of the undifferentiated items makes a stand,<sup>492</sup> first a universal impression [i.e. a phantasm] occurs in the mind; for although it is the particular that is perceived, the perception concerns what is universally common (τοῦ καθόλου), e.g. 'man',

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connection between *σῆναι τὴν διάνοιαν* and *ἐπίστασθαι*; cf. 247b17, and Plato, *Crat.* 437A4. McKirahan (1992, 243) is right in taking the conjunction *ἢ* in its corrective sense ('or rather'), since if it is taken in its alternative sense it would allow an interpretation of the sentence that contradicts other places, such as *Met.* A 1, where Aristotle claims that experience always remains on the level of particulars. Another use of the corrective is found at *EN* III 1, 1110a2-3 ("The person who acts, or rather who is acted upon"), where Aristotle is not talking of two kind of persons, but alludes to the fact that, speaking properly, whoever acts under compulsion is not acting, but rather is acted upon.

<sup>490</sup> For this conjecture (instead of the MSS reading ἀρχήν) see Barnes, 254. Following Philoponus, Zabarella, and Ross (*ad loc.*), McKirahan (1992, 244) retains the MSS reading ἀρχήν and renders "until it reaches the original position". His argument is not convincing.

<sup>491</sup> The same simile is used to illustrate other cases of standstill and densification in the *Problemata* (XVIII 7, 917a31-32 and XXVI 8, 941a11-12).

<sup>492</sup> The frequent occurrence of the notion 'stand' echoes the metaphor of the routed soldiers stopping in their flight, and to some extent continues it; McKirahan (1992), 245.

not Callias the man. Again a stand is made among these items, until what is no further analysable, viz. the universals [i.e. the ten categories] makes a stand. For example, such-and-such an animal<sup>493</sup> makes a stand, until animal comes about, and within the concept of 'animal' similar stands are made.<sup>494</sup> Thus it is clear that it is necessary for us to become familiar with the primary data (τὰ πρῶτα) by induction. For in fact (καὶ γὰρ) it is in this fashion [i.e. by induction] that perception instills what is universal.<sup>495</sup>

The 'undifferentiated things' (τὰ αδιάρφορα) are often taken to be *infimae species* (Ross: "the not further differentiable species"), not individuals, since "the 'stand' of an individual cannot yield anything universal".<sup>496</sup> But it is unclear how this word can mean this, and, what is more, at 97b29-31 Aristotle seems to put τὰ καθ' ἑκάστα and τὰ ἀδιάρφορα on a par, and at least they are clearly contrasted with universals.<sup>497</sup> Surely, the two terms are not just synonyms, inasmuch as the latter rather bears on the undifferentiated state in which the particular things come about in the initially unanalysed phenomenon as presented by sense-perception, in which they are not yet identified as belonging to certain species. It is not the single sense-perception (which, no doubt, cannot yield anything universal, as is patently clear from 100a5-8), but the phantasm representing the common feature sensorially, that counts. Even though it contains any of the material features of the particulars perceived, none the less it represents them, not qua individually belonging to precisely this or that particular, but as features a particular has in common with other particulars.<sup>498</sup> This

<sup>493</sup> E.g. a man or a horse.

<sup>494</sup> The process ultimately ends at one of the ten highest categories.

<sup>495</sup> The 'standstill' metaphor is often used by Aristotle in epistemological contexts to describe how an epistemic power acquiesces, fixing itself upon the object. *Int.* 3, 16b20; *Phys.* VII 3, 247b11-12; *Met.* α 2, 994b24, and *Problem.* XXX 14, 956b39-957a3: "[...] sensation and discursive thinking function in that the mind comes to rest — hence the word ἐπιστήμη seems to derive from the fact that it (knowledge) acquiesces (ἵσθησιν) the mind — because when it is in motion and carried along it can neither have sensation nor think. Therefore children and people who are drunk as well as the insane lack mental perception". The basic idea in the 'standstill' seems to be that the state of uncertainty and 'undifferentiatedness' has come to an end. — Ross rightly refers for the 'standstill' and 'acquiescence' theme to Plato, *Phaedo* 96B5-8; see also for a broader context De Rijk (1986), 268, n. 26; 296, n. 57.

<sup>496</sup> Barnes, 255; 1994, 266; cf. Ross, 674, and 677, where he refers to 97a37; McKirahan (1992), 245.

<sup>497</sup> Tredennick, 259, note d., where Tredennick rightly remarks that the species is perceived in the individual. See also my section 6.87, and in particular Detel's excellent exegesis and assessment of this chapter's main issue (II, 831-6; 854-88).

<sup>498</sup> A similar view of the commonness of perceptible features as represented by sense-perception underlies the description of the cognitive process discussed at



part of the cognitive process precedes our formal apprehension of the several features as logically universal.<sup>499</sup>

With this formal apprehension the proper universal makes its entrance. For instance, Callias, being the substrate of a certain phenomenon, is now properly identified in his capacity of being such-and-such an animal ('land animal'), then, as an instance of the universal 'animal', next as 'living body', 'corporeal being', to land, finally, at the unanalysable category of 'Substance'. At the same time the basic role of sense-perception (including experience) and induction for our acquiring intellectual knowledge has become clear. In this context, the term 'induction' is used in a broader sense to refer to any cognitive progress from the less to the more general.<sup>500</sup> Evidently, this process will provide us with the elements to frame the appropriate definitions.

In the final paragraph Aristotle proceeds to answer the second main question (99b18: 'What is the cognitional habitus involved?') in more detail. His account in effect expresses a more profound view of the objective content of the cognitive discursive process leading to what is universal in things, and, as such, indispensable for the definer and investigator to become familiar with it. Since these contents are as many starting-points for the epistemonical proof, they should be tested for their reliability. First they are distinguished, by this criterion, into those which cannot fail to be true and those which admit falsehood. Clearly the epistemonical starting-points belong to the former class. Now since they cannot owe their infallibility to any epistemonical proof (as was sufficiently shown in the foregoing discussions, and will be underlined once more at 100b13), they must owe it to 'intuitive reason' or 'apprehension' (νοῦς):

*Ibid.* II 19, 100b5-17: Now (1) of the discursive capacities (τῶν περὶ τὴν διάνοιαν<sup>501</sup> ἔξεων) by which we try to grasp truth (ἀληθεύομεν)<sup>502</sup>

*Phys.* I 1, 184a16ff. There it is claimed that what is at first cognizable by us is the indistinct phenomenon presented by sense-perception, which offers it to us as an (as yet unanalysed) whole taken in its universally applying to similar cases; "for it is a whole (τὸ ὅλον) that is more accessible to our sensorial awareness, and what is common forms a sort of whole"; notice Aristotle's playing on the etymological affinity between ὅλον and καθόλου.

<sup>499</sup> The word πρῶτον at 100a16 has a temporal connotation, rather than that of 'primitivity'. Therefore Barnes's suggestion (255; 1994, 266) to render the sentence 100a16 "then for the first time there is ... in the mind" is better suiting the doctrinal context than his translation (81) "there is a primitive universal in the mind".

<sup>500</sup> Barnes, 256; (1994), 267. Engberg-Pedersen, 301f. Note the significance of repeated experiences for the process; cf. *APo.* I 31, 88a5-6. My sections 2.53-2.56.

<sup>501</sup> For διάνοια = 'discursive thinking' (i.e. the kind of thinking that goes with

some are always true and some admit falsehood — I mean (οἶον) opinion (δόξα) and reasoning (λογισμός), whereas genuine knowledge (ἐπιστήμη) and apprehension (νοῦς)<sup>503</sup> are always true — and (2) no sort <of cognition> other than apprehension is more precise than genuine knowledge, and (3) the starting-points of epistemonik proof are more familiar than this,<sup>504</sup> and (4) all genuine knowledge involves an account (μετὰ λόγου).<sup>505</sup> From all these observations it follows that there will not be genuine knowledge of the starting-points; and since it is not possible for anything to be more true than genuine knowledge, there will be *apprehension* of the starting-points — <which is likely> both from the observation of these facts, and also from seeing that the starting-point of epistemonik proof is not itself susceptible of such a proof, so that epistemonik proof is not its own starting-point. Hence, given that we have no other sort <of cognition> at our disposal apart from genuine knowledge, it will be apprehension that is the starting-point of genuine knowledge. And apprehension (ἡ μὲν)<sup>506</sup> will be its own foundation (ἀρχὴ τῆς ἀρχῆς),<sup>507</sup> while the latter as a whole will be in a similar way related to <our knowledge of> the whole domain of objects.

In this concluding paragraph Aristotle intends to make clear that his earlier observations allow for only one conclusion: that the epistemonik basis for any knowledge must be something which is not subject to discursive reasoning, and owes its infallibility to immediate cognition of, or familiarity with, its object. This immediateness will guarantee not only the reliability of the basis itself but also that it can govern the entire domain of genuine knowledge. Thus the function of the starting-points will be mirrored by the performance of apodeixis (in all its stages) with regard to the entire domain of knowable things.

Chapter II 19 has raised numerous problems, pertaining to general and detailed interpretation.<sup>508</sup> A good many of them, I take

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λόγος), De Rijk (1986), 64f. and 296.

<sup>502</sup> I take this verb to be used *de conatu*.

<sup>503</sup> Seidl rightly points out (*ad loc.*, 1971, 69ff.) that the term νοῦς is indiscriminately used in Greek to stand for both the intellect as faculty, including the cognitive attitude, as well as the special cognition involved. To my mind, this cognition is both of the starting-points — i.e. the direct apprehension of the 'indemonstrables' and 'immediates' as dealt with in *An.* III, chs. 4-7 — and the simple apprehension discussed in *Met.* Θ 10.

<sup>504</sup> The genitive should be taken ἀπὸ κοῖνου, i.e. alternatively as a genitivus possessivus and as a genitivus comparationis.

<sup>505</sup> Cf. Plato, *Theaet.* 201C9-210C5; De Rijk (1986), 229-31.

<sup>506</sup> The phrase ἡ μὲν refers back to νοῦς; the feminine form is due to attraction from the predominant feminine predicate ἀρχὴ τῆς ἀρχῆς.

<sup>507</sup> Literally, 'will be the starting-point of the starting-point'. This expression is used to indicate absolute priority; cf. 'The King is his own king'.

<sup>508</sup> Barnes (248-60; 1994, 259-71) scrutinizes the most interesting among them. Detel's thorough discussion is found at II, 829-88.

it, however philosophically interesting in themselves, are not to the point as far as Aristotle is concerned. I shall confine myself to five issues (6. 81; 6. 82-84; 6. 85; 6. 86; 6. 87).

#### 6. 81 *On the relation between II 19 and the earlier parts of Book II*

The opening section of II 19 appears to broach a new subject — the way we become acquainted with the starting-points (or ‘immediates’) of genuine knowledge. The question may arise whether it was perhaps precisely this topic that was discussed in a major portion of Book II, especially where Aristotle explains how we may come to grasp the starting-points *par excellence* — the definitions. One might even ask whether II, 19 belongs to an earlier stage of Aristotle’s thought on the matter, which was later added to Book II.<sup>509</sup>

Barnes (259; 1994, 271) is of the opinion that, all things considered, the relation between II 19 and the rest of the Book remains obscure. His guess is that II 19 came to life as an independent essay on the subject, and was at some later stage tacked on to the discussions of II 1-18. He does not see any conflict between the two, claiming that II 19 “states formally and in abstract terms what II 13, say, had informally implied and concretely illustrated”.

The issue has been taken up by Brunschwig in his paper on the proper object of *APo*.<sup>510</sup> Taking (62ff.) the correspondence between II 19 and the opening sentence of *APr*. (I 1, 24a10-13) quite seriously, he attempts (83) to go beyond Barnes’s “reasonable doubts”. By an extensive analysis of the pertinent texts Brunschwig (83-96) convincingly shows that II 19 cannot be regarded as a likely earlier version of what is also dealt with in the preceding parts of Book II, and that it rather naturally continues the foregoing discussions.<sup>511</sup>

#### 6. 82 *The nature of the ἀρχαί in II 19*

As was argued earlier (my section 6. 35) it is preferable to stick to the ambivalence of the Greek ἀρχαί by rendering it ‘starting-points’ rather than the usual ‘principles’, which might convey (and actually

<sup>509</sup> The issue is clearly worded by Barnes, 249; (1994), 259.

<sup>510</sup> Brunschwig (1981), 82-96.

<sup>511</sup> My basic agreement with Brunschwig’s position may be clear from my earlier comments on the opening lines of II 19. Detel (II, 837-9) sketches the discussions found before Brunschwig.

does with nearly all commentators) that the ἀρχαί should be propositional. It is precisely by ignoring the ambivalence of this Greek term — which Aristotle clearly has in mind as early as in the opening chapter of *APo.* (I 1, 71a11-17) — that modern commentators consider (see *ad loc.*) the question whether the ‘principles’ are primitive propositions or primitive terms a serious problem. The (supposed) puzzle is stated by Barnes (249) in clear terms:

[...] most commentators have found a deep-seated ambiguity in B 19: its ‘principles’ vacillate between primitive propositions and primitive terms. On the one hand, if Aristotle means to talk about the principles of demonstrations, he should be speaking of propositions; on the other hand, much of the language of B 19 suggests that he is speaking of concept-acquisition. Was Aristotle guilty of a gross confusion? Or is there some way out?

One of the commentators who were worried about Aristotle’s discussion of the starting-points on this score is Ross (675f.). He is of the opinion (675) that all ἀρχαί are propositions (in the traditional sense of ‘statements’), while the process described in 99b35-100b5 seems to be concerned with the formation of a universal *concept* (his italics; Ross refers to the production of ‘man’ and ‘animal’ at 100b1-3). Though it would not be difficult, Ross claims, to argue that the formation of general concepts and the grasping of universal propositions are inseparably interwoven, Aristotle makes no attempt to show that the two processes are so interwoven. To Ross, Aristotle could hardly have dispensed with some argument to this effect if he had meant to say that they are so interwoven. Rather, Ross thinks, Aristotle seems to describe the two processes as distinct, and alike only in being inductive (100b3). He goes no further than stating (675f.) that the passage describing the advance from apprehension of a particular to that of the universal should be compared with *Met.* A 1, 980a27-981a12, where the formation of universal judgements is definitely referred to, while much of what Aristotle says is equally applicable to the formation of general concepts.

Detel throughout takes the ἀρχαί as discussed in II 19 to be exclusively real statements (‘Sätze’),<sup>512</sup> and regards the formation of universal concepts as taking place on the road to the starting-points, and as accomplished in terms of statement-making.<sup>513</sup>

<sup>512</sup> “Prinzipien nur im Sinne von ursprünglichen, unvermittelten Sätzen, bzw. Tatsachen” (Detel II, 830; cf. 835; 858; 861ff.).

<sup>513</sup> The road to the ‘principles’ comprises the formation of universal, as yet undifferentiated concepts as well as making them more precise by means of universal

Barnes (259f.; 1994, 271) in fact recognizes the ambivalence of the label ἀρχή. In point of fact, the word may indiscriminately refer to a dictum (including its objective content), like 'that this swan is white' (or 'this swan's being white'), which through experience and memory may lead to 'every swan's being white'; and this universal dictum may be put on a par with logical rules, such as the equals axiom (I 10, 76a41; b20: 'Taking equals from equals, what remains is equal'). However, the 'conceptual story' is likewise adequate: there is at first a sensorial apprehension of 'swan', which through experience and memory leads to the universal apprehension 'swan'.

I can agree with the global lines of Barnes's view of the matter, but object to it on two 'coincidental' points, which may turn out, however, to be of major importance. First, I cannot adhere to Barnes's point of view (249; 1994, 259) on concept-acquisition in terms of abstract terms. As I have argued on several occasions, I would prefer to think of enmattered modes of being, expressed by single terms ('being a swan', 'being a tree', and so on)<sup>514</sup> which refer to particulars *possessing* them (in common with other particulars, admittedly). On this interpretation, single terms are in effect incomplete dictums, while the propositional ἀρχαί are complete dictums ('that-clauses') — not, of course, fully-fledged statements.<sup>515</sup> Secondly, Barnes feels "obliged to concede that Aristotle did not realise that he was vacillating between two stories" (260; 1994, 271), and suggests (*ibid.*) that Aristotle might have himself imagined that the distinction between the two stories was a "trifling pedantry". Such a pedantry, if any, is entirely due to the modern (anachronistic) view that Aristotle marks off single (as well as composite) terms from statements, whereas he instead distinguishes between the former taken as incomplete dictums and complete dictums, which are 'propositional' (in the modern sense), not 'statemental'.<sup>516</sup>

Aristotle's distinction between complete and incomplete dictums (taken in their deep structure as 'assertibles'), on the one hand, and statements or assertions framed by means of the strong hyparctic 'be'

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propositions (887). I agree with Kahn (1981, 385) that there is in Aristotle no real dichotomy between a conceptual and a propositional view of the ἀρχαί; cf. *ibid.*, 389-93.

<sup>514</sup> For single terms including the notion of 'connotative be' my section 1.64.

<sup>515</sup> Part of the idea of "deep-seated ambiguity" is due to the common mistaking *that-clauses* for sentences ('propositions' in the pre-modern sense), and 'propositional' for 'statemental'.

<sup>516</sup> For this important difference my sections 2.12-2.16.

(or the assertoric operator 'is'), on the other, has nothing to do with the difference between starting-points. This should keep us from raising modern problems of the aforesaid kind, which Barnes has so elegantly diagnosed (249) as originating from most commentators finding a deep-seated ambiguity in II 19.<sup>517</sup>

### 6. 83 *The ἀρχαί elsewhere in the Posterior Analytics*

At I 2, 71b24, the starting-points (ἀρχαί) are said to be appropriate to what is about to be proved, in their capacity, that is, of being true, primitive, immediate, most familiar starting-points of epistemonik proof. Some lines further on (72a6-7), Aristotle claims that 'primitive' and 'starting-point' are the same thing, and at 72a15-24 the starting-points are divided into theses ('posits') and axioms, and the former into suppositions and definitions.

The logical priority of the starting-points is emphasized several times (e.g. I 2, 71b29-72a8; 72a38ff.; 6, 74b5ff.; I 24, 86b30). They are equally concerned with axiomatics and concept-acquisition. At I 9, 76a5-7, where the well-known triangle theorem is in order, the state of affairs expressed by the dictum ('that-clause') 'having angles equal to two right angles' is called a starting-point, while at I 10, 76a31-36 the starting-point clearly bears on concept-acquisition. At 76a40 it is expressed by a definitorial formula, whereas only one line further the starting-point is the famous 'equals' axiom. At I 19, 81b10-18 it is evident that the ἀρχαί are in effect the logical rules, *dictum de omni* and *dictum de nullo*, which govern all deductive argument. These are also mentioned at I 23, 84b28-31, where they are called "some non-demonstrable starting-points";<sup>518</sup> they occur in a similar manner at I 25, 86b30-39. At I 22, 84a30-b2, the starting-points should most likely be understood as the undemonstrable primitives and immediates, which are to be found at the end of the finite<sup>519</sup> chain of primitive appellations (in fact, definientia) by which the substrate or attribute under investigation can be designated. They may be such as to be

<sup>517</sup> Detel (II, 839) rightly points to the fact that the older commentators for the most part do not raise problems concerning the precise nature of the starting-points.

<sup>518</sup> Incidentally, the phrase ἔναι ἀρχαί εἰσιν ἀναπόδεικτοι (84b28) does not imply that there should be other starting-points that *are* demonstrable.

<sup>519</sup> This idea is expressed by Aristotle when he says that "it is by a thing's own definiens being inserted, not by introducing a definiens of something external" that the epistemonik proof proceeds.

expressed by incomplete dictums (viz. concepts including their connotative 'be') or complete dictums conveying a primitive state of affairs of the axiom type, which are arrived at when another middle can no longer be found, and the apodeictic process necessarily switches over to the suitable starting-point (in Aristotle's words: "then, there is the path to the starting-points"; I 23, 84b23-24). At I 23, 84b26-31 the logical axioms *dictum de omni* and *dictum de nullo* are contradistinguished as stating the conclusion 'this is this' and 'this is not this', respectively. These axioms are also intended at I 25, 86b30-39, and in I 32 their operation is discussed extensively.

In II 3 the starting-points are clearly associated with defining things (which is the most prominent basic theme of Book II, for that matter): the starting-points are identified as definitions, and their function in the epistemonik process is clarified by sharply contradistinguishing definition (in the sense of 'exhibition of a thing's definiens as actually applying') and epistemonik proof proper. The exhibition of a thing's definiens is also alluded to in the brief chapter II, 9, as well as at II 13, 96b22-23, where the definiens (and what is simple) is said to be the starting-point of everything, and its mediating function in the epistemonik process is indicated ("what holds belongs in themselves to the simples alone, and to the other things in virtue of them"; 96b23-25). In II 19, finally, where apparently the ἀρχαί are taken (99b21) to be primitive, immediate starting-points, they are only instanced (100a15-b5) in terms of concept-acquisition.<sup>520</sup>

Two points may be laid down: (a) in *APo.* I and II the term ἀρχή is used for both the starting-points of concept-acquisition and those bearing on the formation of primitive *that*-clauses, and (b) in II 19, in point of fact, the acquisition of starting-points is only instanced by cases in which concept-acquisition is in order. The latter, however — and this should be well observed — still features in a context (99b20-26) which brings them up as 'primitive, immediate starting-points',<sup>521</sup> about whose awareness (γνώσις) it is asked where it comes from.

<sup>520</sup> In fact, the whole paragraph 100a4-b5 suggests that Aristotle has concept-acquisition in mind.

<sup>521</sup> Τὰς πρώτας ἀρχὰς τὰς ἀμέσους. The feminine ἄμεσος is not only found at 99b22, but also at 72a14ff; 75b40; 86b31 (πρώτασις ἄμεσος); 88b18-89a4 (αἱ γὰρ ἄμεσοι προτάσεις ἀρχαί); 95b31; 96a18. The neuter τὰ ἄμεσα occurs *passim*, e.g. I, 71b21; 75a17; 78a24ff.; 79a31; 81a36; 82b7; 86a15; 89a14ff.; II, 91a34; 93b22; 94a9; 95b22ff.

The adherents to ‘the deep-seated ambiguity thesis’ may be inclined to corroborate it by pointing out that Aristotle in effect puts conceptual and propositional starting-points on a par, inasmuch as he considers (I 33, 88b35-37)  $\nu\omicron\upsilon\varsigma$  itself as the starting-point of genuine knowledge, whereas it is obvious that  $\nu\omicron\upsilon\varsigma$  is not only defined as *the*<sup>522</sup> starting-point of genuine knowledge but is also associated with the grasp of an immediate premiss.<sup>523</sup> In I 23 a similar association is indicated where it is claimed (84b39-85a1) that  $\nu\omicron\upsilon\varsigma$  is the “unit (or simple element) for apodeictic knowledge”, in a similar way as the immediate premiss is the unit in the deductive process. Thus the function assigned by Aristotle to  $\nu\omicron\upsilon\varsigma$  in the earlier parts of *APo.* also includes the acquisition of what appears to be propositional elements.<sup>524</sup>

Kahn (1981, 398f.) rightly claims that this view of  $\nu\omicron\upsilon\varsigma$  governing the cognition of both conceptual and propositional primitives also comes up elsewhere, viz. in *EN* VI, 6 and *An.* III, 4-8. In the former passage in particular, a similar link between  $\nu\omicron\upsilon\varsigma$  and  $\epsilon\tilde{\xi}\iota\varsigma$  as in *APo.* II 19 plays a role in the cognition of the apodeictic starting-points: to lay the basis for genuine knowledge is assigned to  $\nu\omicron\upsilon\varsigma$ , which is taken to be the intellectual virtue connected with  $\epsilon\tilde{\xi}\iota\varsigma$ , which, in turn, is characterized as a natural capacity perfected by training.<sup>525</sup>

All in all, there seem to be good reasons for assuming that *APo.* II 19, too, is about the nous as indiscriminately governing the acquisition of primitive concepts and primitives and immediates of a propositional nature.

#### 6. 84 *No vacillation between primitive theorems and primitive terms*

To object to the idea of there being a ‘deep-seated ambiguity’ in II 19 inasmuch as the starting-points seem to vacillate between primitive propositions and primitive terms is not to say that there is no difference between terms and propositional units in connection with Aristotle’s view of starting-points and their acquisition. Rather the

<sup>522</sup> In his translation of 88b36 Barnes uses the indefinite article (“a principle of understanding”), apparently because the definite article is missing in the Greek text. But Greek idiom does not allow us to add the definite article to a word in predicate position, so that thoughts such as ‘this is *an* [x]’ are to be expressed by saying ‘this is among the [x]-es’ ( $\epsilon\sigma\tau\iota\ \tau\omicron\omega\nu\ \kappa\tau\lambda.$ ).

<sup>523</sup> Kahn (1981), 398.

<sup>524</sup> Seidl (1971), 69-85.

<sup>525</sup> *EN* VI 6, 1139b27 and 32 contain an explicit reference to the *Analytics*.



objection entails that we should refrain from evaluating this difference in terms of the contrast between naming and statement-making or assertion, and, by the same token, that we should not mistake semantic ambivalence for logical ambiguity. To make this clear, two additional remarks on the larger context of the issue dealt with in our previous section should be made.

The technical term ἄμεσος ('immediate') occurring in the label τὰ ἄμεσα and in the alternative phrases, ἄμεσοι ἀρχαί and ἄμεσοι προτάσεις is commonly taken to connote immediateness in the sense of being known by mere analysis of the substrate and attribute terms involved. However, the connotation of being immediately known owing to statemental analyticity is not primary. Instead 'immediate' means 'not having or using a middle', 'not accomplished by means of a middle', 'not in need of a middle', yet without *per se* implying analyticity and necessary truth. Thus the immediateness of definitorial identification ('[x]'s being an actual instance of *F*-ness') has nothing to do with analyticity or necessary truth, but merely bears on the identification being accomplished without adhibiting a mediating term. For this reason, the usual way in which immediateness is exclusively associated by commentators with statement-making (and, consequently, theorems and axioms) is systematically misleading.

In the commentary tradition the issue 'either conceptual or propositional' is single-mindedly viewed in light of the contrast 'concept' vs. 'statement'. But considering Aristotle's basic views of concept formation (naming and categorization) and statement-making, there are no significant reasons for opposing them so sharply as has usually been done from the days of, say, Aristotelico-Boethian logic; quite to the contrary, such a contrast has turned out to be a fatal anachronism.<sup>526</sup> To Aristotle, each and every concept includes what I have called 'connotative being', which means that to him e.g. 'man' basically equals 'being a man'.<sup>527</sup> Besides, as far as statement-making is concerned, Aristotle's 'dictism', which makes him focus on dictums (Aristotle's 'assertibles') instead of fully-fledged assertions,<sup>528</sup> entails that the aforesaid opposition between concept and statement (or

<sup>526</sup> Detel (I, 233f.) is even of the opinion that in *APo.* there is a confused (*sic*) concept of sensation ('Wahrnehmungsbegriff') inasmuch as Aristotle uses 'sense-perception' both for 'propositional sensation' (I, 31 and II, 2), in which case the objects are to be described in sentences ('Sätze'), and non-propositional sensation, which human beings have in common with other animals (II, 19).

<sup>527</sup> My section 1.64.

<sup>528</sup> My sections 2.16 and 3.66-3.69.

assertion) is naturally reduced to the by far less significant distinction between incomplete and complete dictums. Along this line of thought, the acquisition of conceptual units (as performed e.g. by definitorial identification) bears on, say, ‘being a man’ and ‘a man’s being’ — which in the epistemonik process boils down to bringing up [x], [y], and so on, as an instance of being a man, which is a ‘state’ expressed by the incomplete dictum, ‘[a man’s being]’. Again, the acquisition and framing of propositional units does not as such concern fully-fledged statements (assertions) either, but merely complete dictums (‘that-clauses’ or ‘propositions’ in the modern sense), such as the equals axiom (‘that equals subtracted from equals leaves equals’),<sup>529</sup> the law of excluded middle (LEM)<sup>530</sup>, or the rules *dictum de omni* and *dictum de nullo*.<sup>531</sup>

#### 6. 85 Νοῦς and ἔξις

There is some controversy about the precise meaning of ἔξις among the commentators. For a start let us mark out an area of agreement. The focal sense ‘mental state’ is undisputed. Aristotle regularly uses this word to stand for mental dispositions, the cognitive and ethical ones in particular.<sup>532</sup> To Barnes (249; 1994, 260), however, we should not give in to the temptation to slide from ‘disposition’ to ‘faculty’, to observe the apparent appropriateness of the term ‘faculty’ for ἔξις at 99b18, or to conclude that this word means ‘faculty’ throughout II, 19. Barnes (*ibid.*) is helpful enough to produce solid arguments for resisting the temptation. First, there is the plural ἔξεις; second, the initial formulation of the question at 99b18 hardly suggests inquiry into the origins of a faculty; and third, Aristotle’s answer simply cannot be accommodated to this question if thus understood.

However convincing these arguments are in support of the rendering ‘states of mind’ for ἔξεις, they do not rule out the rendering ‘faculty’. Barnes seems to fall victim to his ‘either-or’ approach to the matter. I do not mean, of course, to argue for alternating renderings arbitrarily chosen. Indeed, as a kind of διάθεσις,<sup>533</sup> ἔξις is often used by Aristotle to stand for a thing’s ordered disposition:<sup>534</sup> a qualitative

<sup>529</sup> I 10, 76a41; 11, 77a30-31.

<sup>530</sup> I 1, 71a13-14; 4, 73b23; 11, 77a22 and 30.; 32, 88a37-b1.

<sup>531</sup> I 19, 81b10-18; 23, 84b21-23; 25, 86b30-39.

<sup>532</sup> Bonitz, *Index*, 261a13-24.

<sup>533</sup> *Cat.* 8, 8b28 and 35; 9a3 and 9-10; *Met.* Δ 20, 1022b10.

<sup>534</sup> E.g. *Met.* Δ 19, 1022b1-3

disposition<sup>535</sup>, that is, which is ordered to a certain cognitive or practical attitude. This brings us less than one step away from ‘capacity’ or ‘faculty’.

On the other hand, the passages adduced in Bonitz, *Index*, 261a29-43 appear to put ἕξις somewhere midway between potency (δύναμις) and mere actuality (ἐνέργεια), so that there seems sufficient lexicographical evidence for us to need to refrain from assigning too static a meaning (whether ‘mental state’ or ‘faculty’) to ἕξις, but instead to opt for an ambivalent<sup>536</sup> focal meaning of this word which oscillates between mere capacity and its being actualized, to the effect indeed that on occasions, either one or the other may be predominant.

As we saw before, ἕξις is an ambivalent term which does not merely stand for a disposition or faculty but includes its actualization as well. Thus genuine knowledge (ἐπιστήμη) can be called a ἕξις by Aristotle inasmuch as, qua actualization of the cognitive faculty, it disposes the soul accordingly.<sup>537</sup> In the opening lines of *PA* (I 1, 639a1-4), Aristotle clearly starts from this twofold connotation of ἕξις by distinguishing it into knowledge of an object and what he calls a sort of skill acquired by education (οἶον παιδείαν τινά). At *Top.* VIII 1, 156b39 it is clear from the context that the phrase πιστεύοντες τῇ ἕξει should be taken to mean “trusting to their disputational skill developed by practice”.<sup>538</sup> In *Problem.* XXX 2 a similar intermingling of the two connotations (‘expertise taken as actualized faculty’) is found: “Why do we say that we acquire a hexis as the result of pursuing some pieces of knowledge but not others? Or is it rather so that we are said to possess a hexis inasmuch as we are able to make discoveries <by actually using it>? for making discoveries is a result of a hexis” (955b1-3). Detel (II, 857) aptly takes the hexis as discussed in II, 19 to be a cognitive condition or attitude owing to which the soul possesses something or has command of it.<sup>539</sup>

<sup>535</sup> *Cat.* 8, 8b27-35, where ἕξις is defined as a permanent qualitative disposition.

<sup>536</sup> I do not say ‘ambiguous’; for the important difference between ambivalence and ambiguity, and the pivotal role of semantic ambivalence in Aristotle’s thought see my section 1.72.

<sup>537</sup> E.g. *Cat.* 8, 8b29; *Pol.* IV 1, 1288b17. At *EN* VI 3, 1139b31, where knowledge is defined as ἕξις ἀποδεικτική, there is an explicit reference to the *Analytics*. In the chapter at present under consideration (II 19, 99b18) there is talk of ἡ γνωρίζουσα ἕξις.

<sup>538</sup> Bonitz, *Index*, 261a11-12: “exercitationi et paratae inde facilitati disputandi”.

<sup>539</sup> “Es scheint demnach klar, dass die ἕξις der Seele weder nur eine Disposition der Seele ist [...], noch eine blosze Fähigkeit der Seele, irgend etwas zu tun — sondern primär ein epistemischer [...] Zustand, in welchem die Seele etwas besitzt

I have chosen earlier for the rendering ‘habitus’ to retain the twofold connotation. The underlying view can also be corroborated from the doctrinal point of view. On several occasions Aristotle clearly associates dispositional capacities and their being exercised (‘actualised’) so closely as to make them appear to be just two sides of the same coin.<sup>540</sup> When he warns us at *Top.* V 2, 129b30-130a5 against using terms with more than one meaning, Aristotle gives the example of the verb αἰσθάνεσθαι (‘to be sentient’), which signifies both to be possessed of sense-perception and to exercise sense-perception. Likewise at *An.* II 5, 417a9-14 these two meanings of the one verb αἰσθάνεσθαι are mentioned and contrasted as possessing the faculty and exercising it. What for our purposes is still more to the point, at *Top.* V 2, 130a19-22, the meaning of ἐπίστασθαι is likewise distinguished into having knowledge and exercising it.<sup>541</sup> At *Met.* Δ 7, 1017b3-5, the same distinction is made from the viewpoint of potential vs. actual modes of being. A parallel distinction holds good for differentiating the objects of knowledge, as we already saw when we discussed *APo.* I 7, 75b17-20, where it is claimed that geometry proves attributes of lines, not qua particular instances as such, but in virtue of the instantiation they have in common with other particulars of that kind. Finally, one can refer to Aristotle’s discussion of what he calls (*Met.* B 4, 999a24-25) “the difficulty which is the hardest of all and the most necessary to examine” for the metaphysician, particularly in light of Plato’s metaphysics, viz. the relationship between ‘individual’ and ‘universal’.<sup>542</sup> In this context, too, potential knowledge is contrasted with actually knowing, and their close connection when it comes to actual practice is made clear by pointing out that in actual knowledge the particular ‘this’ is known as *a* this.<sup>543</sup>

Thus to regard the distinction between cognitive capacity and its being exercised as in principle an ‘either-or’ issue conflicts with Aristotle’s basic view of the matter, which entails that these verbs have a focal meaning that precedes the bifurcation ‘faculty possessed’ and ‘faculty exercised’. So in some contexts it is useful to carefully mark

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oder beherrscht”.

<sup>540</sup> Cf. *Detel* II, 865f.

<sup>541</sup> In *EN* VII 5, 1146b31-35, this distinction is applied in order to answer the moral question whether he who fails in self-restraint is in error when he knows what is right.

<sup>542</sup> It is expounded at B 4, 999a25-32 and 6, 1003a5-17, and solved, in line with Aristotle’s basic metaphysics, at M 10, 1087a10-25.

<sup>543</sup> Cf. *APo.* II 19, 100a15-b2.

off the secondary uses. In addition, Aristotle has the constant habit of never taking what is potential to be purely potential, but always as something which is somehow actualized.<sup>544</sup>

In the final analysis Barnes, too (250; 1994, 260), associates the mental 'states' or 'havings' with 'graspings', and rightly points out that the Greek verb ἔχειν combines the notions 'have' and 'grasp'.

As for νοῦς, its role in the preparatory stage of the epistemonik process should be assessed in the context of our previous findings. Lexicographically, the word may be used to stand for the faculty of apprehending the universal and the actual apprehension of it. In II 19 Aristotle (100a6-b5) pictures the role νοῦς has in the process by which sense-perception leads us, via memory and experience, to getting a grasp of universal concepts.

The role of νοῦς was spoken of earlier more than once. At *APo.* I 23 the primitive and simple nature of the ἀρχή as functioning in the epistemonik procedure is illustrated by comparing it to other cases in which something acts as an indivisible element (τὸ ἓν) resisting further analysis. Aristotle tells us how to select a proper 'middle':

*APo.* I 23, 84b31-85a1: When you have to show (δείξει) something, you should assume <as the appropriate middle> what is said primitively (πρωτον)<sup>545</sup> of *B*. Let it be *C*; and let *D* be said likewise of this. And if you always proceed in this way no premiss concerning anything belonging outside *A* will ever be assumed in the exhibition (ἐν τῷ δεικνύναι), but the middle will always be thickened, until it becomes indivisible and simple. Now, it is simple when it has come about as an immediate thing; and it is only the immediate premiss that is one in the unqualified sense. Just as in any other cases the starting-point is something simple (ἡ ἀρχὴ ἀπλοῦν), though it is not the same everywhere (in weight it is the ounce, in song the semitone, and in other cases other things), so in deduction the simple thing (τὸ ἓν) is the immediate premiss, while in epistemonik proof and genuine knowledge that which is apprehended (ὁ νοῦς) is the immediate element.

Evidently, νοῦς is used to stand not for the act of apprehension, but its objective content.<sup>546</sup> At I 33 the role of νοῦς is described with regard to the opposition of genuine knowledge to opinion. It is claimed (88b35-36; my section 5.44) that no apprehension (νοῦς) is concerned with contingent things. That is to say, taking apprehension as the starting-point of genuine knowledge, it is not the

<sup>544</sup> In a similar vein at *An.* III 4 (esp. 429b14-18) and 5, both νοῦς and τὸ αἰσθητικόν are faculties in action, rather than just abilities.

<sup>545</sup> Lit. 'as a primitive element', or commensurately.

<sup>546</sup> Semantic Main Rules RIR and RMS; my section 1.71.

contingent thing as such that is under investigation, but the universal, necessary, and changeless *eidos* inhering in it.<sup>547</sup>

The last paragraph of this chapter (I 33, 89b7-9) contains a vague allusion to the differences between discursive thought (διάνοια), intuitive apprehension (νοῦς), genuine knowledge (ἐπιστήμη), skill (τέχνη), prudence (φρόνησις), and wisdom (σοφία).<sup>548</sup> The first three oppositions are the ones we are interested in now, because they stress the special character of the cognitive attitude relating to νοῦς in a twofold way, viz. by opposing νοῦς both to non-simple, discursive thought and to knowledge as acquired through a mediating concept ('middle').

Thus the several occurrences of νοῦς in the *APo.* up to II 19 are fully in keeping with what we are told in the concluding chapter of this treatise.<sup>549</sup>

#### 6. 86 *Is II 19 'Janus-faced', vacillating between empiricism and rationalism?*

Barnes (248f.; 1994, 259) speaks about the classic problem in Aristotelian scholarship concerning Aristotle's epistemology combining the 'empiricist' tool of induction with the seemingly 'rationalist' way in which the νοῦς is supposed to do its job. Is II 19 Janus-faced, looking in one direction towards empiricism, and in the other to rationalism? he asks. Barnes (259; 1994, 270) is quite right in deeming the Janus character illusory. But his line of argument seems questionable. Aristotle's answer to the first question (99b18: 'How do the starting-points become familiar?') is 'whole-heartedly empiricist' (in Barnes's words), whereas νοῦς, being an answer to the second question (*ibid.*: 'What is the cognitional habitus involved?'), is not a rival, rationalistic answer to the first question (Barnes claims), as might be suggested by the usual rendering 'intuition', given as what he labels "the orthodox view". This view holds that, just as the two questions are closely related and even complementary, so the two answers are interdependent. In Barnes's apt phrasing of the matter (256f.; 1994, 268): in the orthodox view, the chasm which 'induction' will not leap must

<sup>547</sup> Detel (II, 524) refers to a sophisticated division made by Philoponus (*ad loc.*) of the different cognitive attitudes (supposedly) involved here, including the distinction between νόησις and non-demonstrative 'knowledge'. Modern commentators (Ross, 657f.; Mignucci 1975, 647f.; Barnes, 190; 1994, 199) join Zabarella in identifying non-demonstrative grasping and apprehension.

<sup>548</sup> For the text, my section 6. 44.

<sup>549</sup> The role of νοῦς as described in *APo.* II 19 is also consistent with what is said in *Met.* A 1, and *An.* III 4-7. Kahn (1990), 399-414.

be flown over on the back of 'intuition'. In short, Barnes continues his report of the orthodox view: the starting-points are apprehended by induction plus intuition, or by what is called 'intuitive induction'. The situation is a bit complicated by the fact that some scholars find the orthodox view artificial in its attempt to reconcile the inductive and intuitive elements in Aristotle's account, and prefer to accept it as a sad truth that Aristotle entertained two mutually inconsistent theories about our becoming familiar with the starting-points.

Barnes (*ibid.*) is of the opinion that both the adherents to the orthodox view and the scholars who accepted that Aristotle held two inconsistent theories, are on the wrong track because of their common failure to distinguish the first question from the second (as Aristotle carefully does, in Barnes's view). Given that the two questions are genuinely distinct, their answers cannot conflict in the way the unorthodox fear, nor need they be reconciled after the fashion of the orthodoxy.<sup>550</sup>

However, as we have argued before, the two questions are so closely related that Aristotle answers them as being utterly interwoven. Therefore the orthodox view as well as the unorthodox one should be rejected along a different line of argument. In fact, the very idea that Aristotle should have been faced with the (post-Cartesian) opposition 'either empiricism or rationalism' is an anachronism. Thus there is no inconsistency in Aristotle's answers, nor is there anything to reconcile, since there is no 'empiricism' or 'rationalism' in Aristotle at all. Ross (86) rightly claims that Aristotle is neither an empiricist nor a rationalist, but recognizes that sense and intellect are mutually complementary.<sup>551</sup> He refers to the same balance in Aristotle's account of the way in which a discipline proceeds from its starting-points to its conclusions. To be sure, this also holds for any particular piece of genuine knowledge.

Thus to Aristotle, sense-perception and noetic perception are clearly interwoven, as is evident not only from the military simile in II 19 but also from the picture he presents of the entire epistemonical process, which unmistakably testifies to its empirical framework. As a matter of fact, like Aristotle's philosophy as a whole, this process is ultimately concerned only with the things that really exist, the particulars.

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<sup>550</sup> Barnes, 257; (1994), 268.

<sup>551</sup> Detel (II, 841-6) puts the divergent interpretations defended by Ross and Barnes, respectively, in their broader historical contexts.

6. 87 *Particulars as the proper objects of epistemonik proof*

In *APo.* Aristotle intends to define what ἐπιστήμη ('scientific', or rather 'genuine' knowledge) consists in.<sup>552</sup> Notwithstanding his rejection of the Platonic Transcendent, Separate Forms as the only foundation of genuine knowledge, Aristotle fully agrees with his Master that genuine knowledge should concern the essential natures of things, and those alone.<sup>553</sup> However, as is well known, Aristotle finds the essential natures of everything that is *in* the things themselves as their immanent dynamic forms (εἶδη). The Stagyrte is quite explicit on this score. In I 2 he claims (72a26-27) that the elements of the deductive argument are such-and-such in concreto (τῷ ταδὶ εἶναι).<sup>554</sup> That this claim is representative of the whole purport of Aristotle's theory of epistemonik proof is patently clear from the role he assigns to defining, which is in effect the definitorial identification of particulars.

Ackrill (1981, 102) has aptly characterized the epistemonik process as a "movement from a rough idea to a full understanding of what some kind of thing or type of event is". In fact, any epistemonik enquiry starts from particulars of the outside world, to the extent indeed that the aforesaid 'kind of thing or type of event' is some particular [*x*] or [*y*], and definitely not some abstract nature taken as such, apart from its being enmattered. That genuine knowledge is after the universal nature as it is immanent in something as a particular instantiation is entirely in line with Aristotle's thought.<sup>555</sup> That is to say that Aristotle's investigator is concerned with clearing up the essential structure of the actual phenomenal state of affairs under examination.<sup>556</sup> In a word, what is investigated is particular

<sup>552</sup> See for the subject-matter in general, Ross (1949), Mignucci (1965), Barnes (1975; 1994, *Introd.* XI-XIV), Seidl (1971), Guthrie (1981: 170-202), Ackrill (1981: 94-106), Boh (1990), De Rijk (1990a) and (1990b); Detel II, 246f.; cf. 418-31; 494-501.

<sup>553</sup> E.g. *APr.* I 33, 47b1ff.; *APo.* I 6, 74b33ff.; 75a20ff.; I 8; I 30. At *Met.* M 3, 1077b18-22, it is claimed that just as general propositions in mathematics are not about separate objects over and above particular magnitudes and numbers but are about these, albeit qua having magnitude or being countable; clearly it is also possible for there to be statements and proofs about perceptible magnitudes, but not qua perceptible but qua being of a certain kind (ἢ τοιαῦτά).

<sup>554</sup> At I 4, 73a29-31, the object of the proof is likewise a concrete particular.

<sup>555</sup> E.g. *Met.* A 9, 991a12-13; B 4, 999b24-29; Δ 11, 1018b36; Z 7, 1032b1ff and 11, 1037a29-30. Compare *Cat.* 5, 2a34-b6; for this passage see Ackrill (1963), 82f.; De Rijk (1980), 40; and my present section 4.43, p. 391.

<sup>556</sup> De Rijk (1990), 107f.



being, period. The investigator's interest is merely a matter of formal approach.<sup>557</sup>

For this reason we should not say (with Barnes, 141) that where singular terms "creep into" Aristotelian syllogisms, they are tacitly treated as universal terms. Rather, particular things are taken as instances possessing (particular) instantiations of properties which hold universally of any other member of a certain class. And it is in virtue of this general nature that *they* (the particulars, that is, not these universal natures as such) are the proper objects of investigation. Technically speaking, the particulars are brought up as specified by the qua-functor.<sup>558</sup>

The misunderstandings about Aristotle's supposed lack of interest in particulars as far as genuine knowledge and apodeictic deduction are concerned, has everything to do with the usual mistaking of naming and appellation for sentence predication, in that the latter is judged (and rightly so) to be concerned with universal concepts.<sup>559</sup> However this is not to say that universality as such is at the focus of interest. It is, rather, universality as a formal aspect of particular things, or universality as enmattered in particular things that genuine knowledge and epistemonik proof are all about.<sup>560</sup>

It should also be recalled that even in an abstract discipline such as mathematics, when we speak of, say, a triangle inscribed in a semi-circle (94a28), Aristotle has a particular instantiation of triangularity

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<sup>557</sup> Aristotle's fundamental problem is that of 'particularity' vs. 'universality'. Ackrill (1981), 96-9. Aristotle's attempt to solve this problem has much to do with his view of induction.

<sup>558</sup> My sections 2.71-2.73 and 6.34. Detel (I, 170) rightly refers to *APr.* II 24, 68b41-69a11, where the particular war between Athenians and Thebans is formally considered qua 'something being evil', not in virtue of its being *this* war or *this* evil thing.

<sup>559</sup> Throughout the history of Aristotelico-Boethian logic the predicate term of the 'S is P' construct has been taken to refer to a universal nature ('forma') connoted by this term, whereas, as a rule, the subject term was thought to denote something.

<sup>560</sup> Detel (I, 170-2) rightly emphasizes Aristotle's interest in particulars on this score, but fails to associate this phenomenon with the basic tenets of Aristotle's metaphysics concerning the actual nature of things. Jacobs (1980, 183-8) convincingly argues for the view that it is concrete particulars Aristotle is dealing with; cf. Wedin (1978), 181. Incidentally, Goldin's assumption (1996, 41-77, esp. 75: "Like real substances, some of these kinds have certain essences") of 'epistemic substances' in Aristotle's epistemonik procedure is entirely due to the fact that he persistently fails to recognize that to Aristotle, although they can be separated logically from the particular instances they inhere in, instantiations should never be considered as if they were not actually inherent in this or that particular.

in mind, e.g. a triangle (to be) construed in this semicircle, realised here and now.

### 6. 9 *Conclusion*

1. By and large, *APo.* is about how to acquire genuine knowledge (ἐπιστήμη). The epistemoni process consists of two main parts, one the preparatory stage, the other the process proper.
2. As early as in the opening chapter of the treatise (I 1) Aristotle stresses the indispensability of the investigator's initial familiarity with the intended object to some extent. This pre-existent acquaintance (γνώσις) is basically different from the intended genuine knowledge, and, accordingly, these two are well distinguished linguistically, also.
3. There is a corresponding difference between 'proving' in the strict, epistemoni sense (ἀποδεικνύναι) and 'exhibiting' or 'revealing' (δεικνύναι) the elements making up the preparatory process.
4. Right at the start of the discussion the pre-existent familiarity turns out to be twofold: it bears both on propositional 'units' (or 'unitary items'), i.e. complete dictums (comparable to our 'that-clauses'), such as logical laws, as well as on certain 'states' signified by definientia or other incomplete dictums, applicable to certain particular instances.
5. Whereas the proper process of proving a certain attribute to apply to a certain substrate always proceeds through a 'middle' ('something mediate'), the (acquisition of) pre-existent familiarity is immediate.
6. The basic distinction between the preparatory stage, which concerns pre-existent acquaintance, and the proper epistemoni process is mirrored by the important opposition between 'defining' and 'proving'.
7. To define is either to reveal what a name or name-like expression signifies ('nominal definition') or is (still in the preparatory stage) concerned with exhibiting a definiens's actual application to one or both of the components (substrate and attribute) of the proof proper. Such an 'exhibition' in effect boils down to 'defining' or 'identifying' something as satisfying a certain definiens.<sup>561</sup>

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<sup>561</sup> This should be put in the right historical perspective by linking it with the process of naming and identification found in Plato. For Plato, the cognitional process amounts to assiduously striving after the recognition and identification of forms ('instantiations') that as δυνάμεις are immanent in the outside things which

8. As for the epistemonical process proper, which is intended to prove that a certain attribute is truly assigned to a substrate, the καθ' ὅλον requirement is essential — in other words the attribute should be commensurately assigned to the substrate, i.e. precisely match the entire quiddity signified by the substrate term.

9. This will be the case if the substrate underlying the phenomenon under investigation is brought up under a suitable appellation.

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possess them by sharing the transcendent Forms. For this non-propositional 'knowledge by acquaintance' in Plato see De Rijk (1986), 341-7. Also my section 11.4 in Vol. II.

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